Tier I Site Assessment

Main CSJ: 1502-02-002

Form Prepared By: Nick Wallisch, Blanton & Associates

Date of Evaluation: September 30, 2019

Proposed Letting Date: August 2020

District(s): Lubbock

County(ies): Lubbock

Roadway Name: Loop 88 Segments 1 and 2

Limits From: US 84

Limits To: US 62/82

☐ *Project is classified as a Categorical Exclusion*

☐ *Project not assigned to TxDOT under the NEPA Assignment MOU*

Project Description: The Texas Department of Transportation (TxDOT) Lubbock District proposes to construct Segments 1 and 2 of Loop 88 in Lubbock County, Texas. The proposed project would construct a controlled access facility consisting of a six-lane divided freeway (three lanes in each direction) with two-lane frontage roads, associated ramps, and grade separated diamond intersections. Segment 1 of Loop 88 begins at United States Highway (US) 84 and Farm-to-Market (FM) 2641 intersection and generally follows FM 2641, then curves southward to follow County Road (CR) 1300 (Research Boulevard), where it then connects with Segment 2 at State Highway (SH) 114. Segment 2 of Loop 88 begins at the CR 1300/SH 114 intersection and generally follows CR 1300 to the south, before curving towards the southwest then back to the southeast to connect with the US 62/82 intersection and the beginning of Segment 3. The two segment designations are for construction phasing purposes. The logical termini for this project are US 84 to the north to US 62/82 to the south (Figures 1 and 2). Construction limits for the project are US 84 to the north and 0.5 mile northwest of US 62/82 to the south. The project length is approximately 16.05 miles.

Portions of the proposed project follow existing transportation facilities. From the northern construction limit, the project intermittently follows FM 2641 for approximately 4.26 miles. The existing FM 2641 is a two-lane undivided roadway with one lane in each direction. The project then intermittently follows CR 1300 south for approximately 8.33 miles. The existing CR 1300 is an unimproved dirt road approximately 20 feet wide. The remainder of the proposed project is on new location.

The TxDOT Lubbock District is proposing to construct Loop 88 from US 84 to US 62/82 in Lubbock County, Texas. For Segment 1, the frontage roads would start at US 84 while the mainlanes would begin approximately 0.97 mile west of US 84. Segment 2 would end approximately 0.48 mile northwest of US 62/82. The proposed improvements would include constructing a six-lane divided freeway, three lanes in each direction, with two-lane frontage roads in each direction. The proposed mainlanes would consist of six 12-foot-wide travel lanes with 10-foot-wide outside shoulders and 11-foot-wide inside shoulders. The proposed frontage roads consist of two 12-foot-wide travel lanes with 8-foot-wide outside shoulders and 4-foot-wide inside shoulders. The proposed right-of-way (ROW) width is 400 feet.

There are approximately 29.95 acres of existing ROW. The proposed project would require approximately 850.08 acres of proposed ROW, and approximately 96.22 acres of drainage easements.

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

1. No — Is the project limited to a maintenance activity exempt from coordination?
   http://txdot.gov/inside-txdot/division/environmental/maintenance-program.html

2. No — Has the project previously completed coordination with TPWD?

3. Yes — Is the project within range of a state threatened or endangered species or SGCN and suitable habitat is present?

*Explain:

There is potential habitat for one state-listed threatened species located within or directly adjacent to the proposed project area: Texas horned lizard (Phyrnosoma cornutum).

There is also potential habitat for 14 species of greatest conservation need within or directly adjacent to the proposed project area: Woodhouse's toad (Anaxyrus woodhousii), mountain plover (Charadrius montanus), western burrowing owl (Athene cunicularia hypugaea), American badger (Taxidea taxus), black-tailed prairie dog (Cynomys ludovicianus), eastern spotted skunk (Spilogale putorius), plains spotted skunk (Spiogale putorius interrupta), prairie vole (Microtus ochrogaster taylori), swift fox (Vulpes velox), western hog-nosed skunk (Conepatus leuconotus), western box turtle (Terrapene ornata), western hognose snake (Heterodon nasicus), western rattlesnake (Crotalus viridis), and Cory's ephedra (Ephedra coryi).

Ditches and canals associated with roadways and agriculture and other low areas that collect rainwater could provide potential habitat for Woodhouse's toad. The BMP Programmatic Agreement (PA) (revised in 2017) does not include BMPs for this species.

Shortgrass prairies and agricultural fields with bare ground within the proposed project area could provide suitable habitat for mountain plover. Shortgrass prairies and open areas such as vacant lots within the proposed project area could provide potential habitat for the western burrowing owl. Bird BMPs will be implemented to minimize potential impacts to these species.

Open grasslands and agricultural fields with relatively sparse vegetation may provide suitable habitat for the black-tailed prairie dog, and one black-tailed prairie dog colony is located within and adjacent to the project area. TxDOT will coordinate with TPWD WHAB if burrows of the species are encountered during construction, and contractors will be advised of the potential occurrence of the species in the proposed project area and to implement BMPs that will prevent the movement of the species into the proposed project area to minimize potential impacts. Open fields, prairies, and croplands could provide suitable habitat for the American badger and eastern/plains spotted skunk. Contractors will be advised of the potential occurrence of the eastern/plains spotted skunk within the proposed project area, to avoid harming the species if encountered, and to avoid unnecessary impacts to dens. Open fields, croplands, and farm yards may provide suitable habitat for the prairie vole. Shortgrass prairie within and adjacent to the project area could provide suitable habitat for the swift fox. Grasslands located within and directly adjacent to the proposed project area may provide potential habitat for the western hog-nosed skunk.

Open areas with sparse vegetation within the proposed project area may provide suitable habitat for the Texas horned lizard. Terrestrial reptile BMPs will be implemented to minimize potential impacts to these species. For Texas horned lizards, contractors will be advised to avoid harvester ant mounds in the selection of Project Specific Locations (PSLs). Grasslands, pastures, and croplands located within the proposed project area may provide suitable habitat for the western box turtle. Prairies or Conservation Reserve Program (CRP) grasslands located throughout the proposed project area may provide suitable habitat for the western hognose snake. Grasslands within the proposed project area may provide suitable habitat for the western rattlesnake.

Dry grasslands within the project area could provide habitat for Cory's ephedra. The BMP PA does not include BMPs for plant species.

While the BMP PA includes BMPs for entire taxa like amphibians or terrestrial reptiles, it does not cover species that were recently added to TPWD county lists in April 2019. These include Woodhouse's toad, American badger, swift fox, prairie vole, western hog-nosed skunk, western box turtle, western hognose snake, and western rattlesnake.

See the attached Species Impact Table for more information about species impact determinations.

Date TPWD County List Accessed: September 27, 2019

Date that the NDD was accessed: March 5, 2019

What agency performed the NDD search? TPWD

NDD Search Results for EOIDs and Tracked Managed Areas

EOID Number	Common Name	Scientific Name	Listing Status	Buffer Zone
4119	Swift Fox	*Vulpes velox*	ST	10 Mile
8176	Prairie Dog Town	*NA*	NA	10 Mile
13882	Western hog-nosed skunk	*Conepatus leuconotus*	SGCN	10 Mile
7272	Western Burrowing Owl	*Athene cunicularia hypugaea*	SGCN	10 Mile
7686	Plains Spotted Skunk	*Spilogale putorius interrupta*	SGCN	10 Mile
8626	Texas horned lizard	*Phrynosoma cornutum*	ST	10 Mile
523	Prairie Dog Town	*NA*	NA	10 Mile

No — Does the BMP PA eliminate the requirement to coordinate for all species?

Comments:

The proposed project contains potential habitat for one state-listed threatened species and 14 SGCN. BMPs are available and will be implemented for six of these species, but there are no approved BMPs for the Woodhouse's toad, American badger, prairie vole, swift fox, western hog-nosed skunk, western box turtle, western hognose snake, western rattlesnake, or Cory's ephedra. Therefore, coordination with TPWD will be required for potential impacts to these species.

4. No — NDD and TCAP review indicates adverse impacts to remnant vegetation?

Comments:

NDD and TCAP show no native remnant vegetation is located within the proposed project area.

5. No — Does the project require a NWP with PCN or IP by USACE?

Comments:

No impacts to waters of the U.S. are anticipated. However, if impacts are required, it is anticipated that the proposed project would be authorized by a Nationwide Permit (NWP) 14, Linear Transportation Projects, without a Pre-construction Notification (PCN).

6. No — Does the project include more than 200 linear feet of stream channel for each single and complete crossing of one or more of the following that is not already channelized or otherwise maintained:

Comments:

The proposed project does not include 200 linear feet of channel realignment or stream bed/bank excavation.

7. No — Does the project contain known isolated wetlands outside the TxDOT ROW that will be directly impacted by the project?

Comments:

The proposed project would not impact known isolated wetlands outside of the TxDOT ROW.

8. Yes — Would the project impact at least 0.10 acre of riparian vegetation?

*Explain:

The proposed project would potentially impact up to approximately 161.29 acres of Western Wetlands, Riparian MOU vegetation.

9. Yes — Does project disturb a habitat type in an area equal to or greater than the area of disturbance indicated in the Threshold Table Programmatic Agreement?

*Explain:

The proposed project (assuming ROW to ROW permanent impacts) would exceed the impact threshold for the Agriculture MOU type, Disturbed Prairie MOU type, Mixed Arid Sand Grassland MOU type, and Western Wetlands, Riparian MOU type, as indicated in the MOU Threshold Table Programmatic Agreement between TxDOT and TPWD. See attached Field-verified Vegetation MOU summary table.

*Attach associated file of EMST output (Mapper Report or other Excel File which includes MOU Type, Ecosystem Name, Common/Vegetation Type Name) in ECOS

Excel File Name:

EMST Vegetation Table

9.1. Yes — Is there a discrepancy between actual habitat(s) and EMST mapped habitat(s)?

*Explain:

Figures 3.1 through 3.11 (attached) provide EMST mapped vegetation and Figures 4.1 through 4.11 (attached) provide field-verified vegetation.

Attach file showing discrepancy between actual and EMST mapped habitat(s).
File Name:

Figures 3.1 through 3.11 (attached) provide EMST mapped vegetation and Figures 4.1 through 4.11 (attached) provide field-verified vegetation.

Is TPWD Coordination Required?

Yes

☒ Early Coordination

☐ Administrated Coordination - Must be conducted through ENV-NRM

BMPs Implemented or EPICs included (as necessary):

In addition to complying with the Migratory Bird Treaty Act (MBTA), Bird BMPs (listed below) will be implemented for the mountain plover and the western burrowing owl.

For the black tailed prairie dog:
1) If burrows are to be excavated/directly impacted coordinate with TPWD WHAB.
2) When a construction zone is adjacent to a BTPD colony, erect barriers to discourage BTPD moving through or into the construction area
3) When seeding or revegetation is planned by TxDOT in an area adjacent to a BTPD colony vegetative barrier will be considered in the planting to discourage dispersal into the ROW.

For the eastern/plains spotted skunk, contractors will be advised of their potential occurrence in the project area, to avoid harming the species if encountered, to avoid unnecessary impacts to dens.

Terrestrial Reptile BMPs (listed below) will be implemented for the Texas horned lizard, and contractors will be advised of the potential occurrence in the project area, and to avoid harming the species if encountered. This should include avoiding harvester ant mounds in the selection of PSLs.

Bird BMPs:
• Prior to construction, perform daytime surveys for nests including under bridges and in culverts to determine if they are active before removal. Nests that are active should not be disturbed.
• Do not disturb, destroy, or remove active nests, including ground nesting birds, during the nesting season;
• Avoid the removal of unoccupied, inactive nests, as practicable;
• Prevent the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair;
• Do not collect, capture, relocate, or transport birds, eggs, young, or active nests without a permit.

Terrestrial Reptile BMPs:
• Apply hydromulching and/or hydroseeding in areas for soil stabilization and/or revegetation of disturbed areas where feasible. If hydromulching and/or hydroseeding are not feasible due to site conditions, utilize erosion control blankets or mats that contain no netting or contain loosely woven, natural fiber netting is preferred. Plastic netting should be avoided to the extent practicable.
• For open trenches and excavated pits, install escape ramps at an angle of less than 45 degrees in areas left uncovered. Visually inspect excavation areas for trapped wildlife prior to backfilling.
• Inform contractors that if reptiles are found on project site allow species to safely leave the project area.

TxDOT Contact Information

Name:

Phone Number:

E-mail:

Suggested Attachments

Aerial Map (with delineated project boundaries)

USFWS T&E List

TPWD T&E List

Species Impact Table

NDD EOID List and Tracked Managed Areas (Required for TPWD Coordination)

EMST Project MOU Summary Table (Required for TPWD Coordination)

TPWD SGCN List

Photos (Required for TPWD Coordination)

Previous TPWD Coordination Documentation (if applicable)

Figures

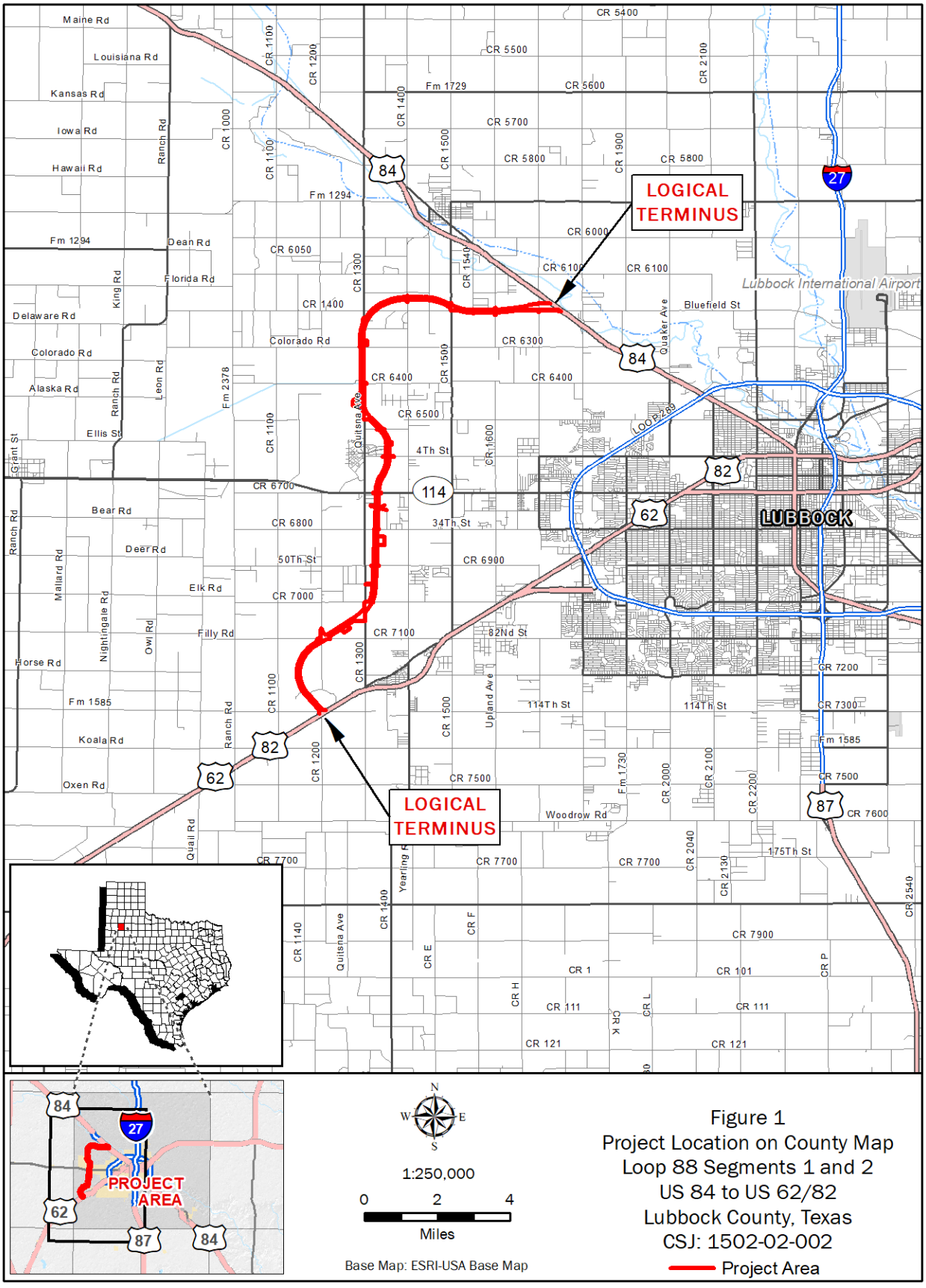
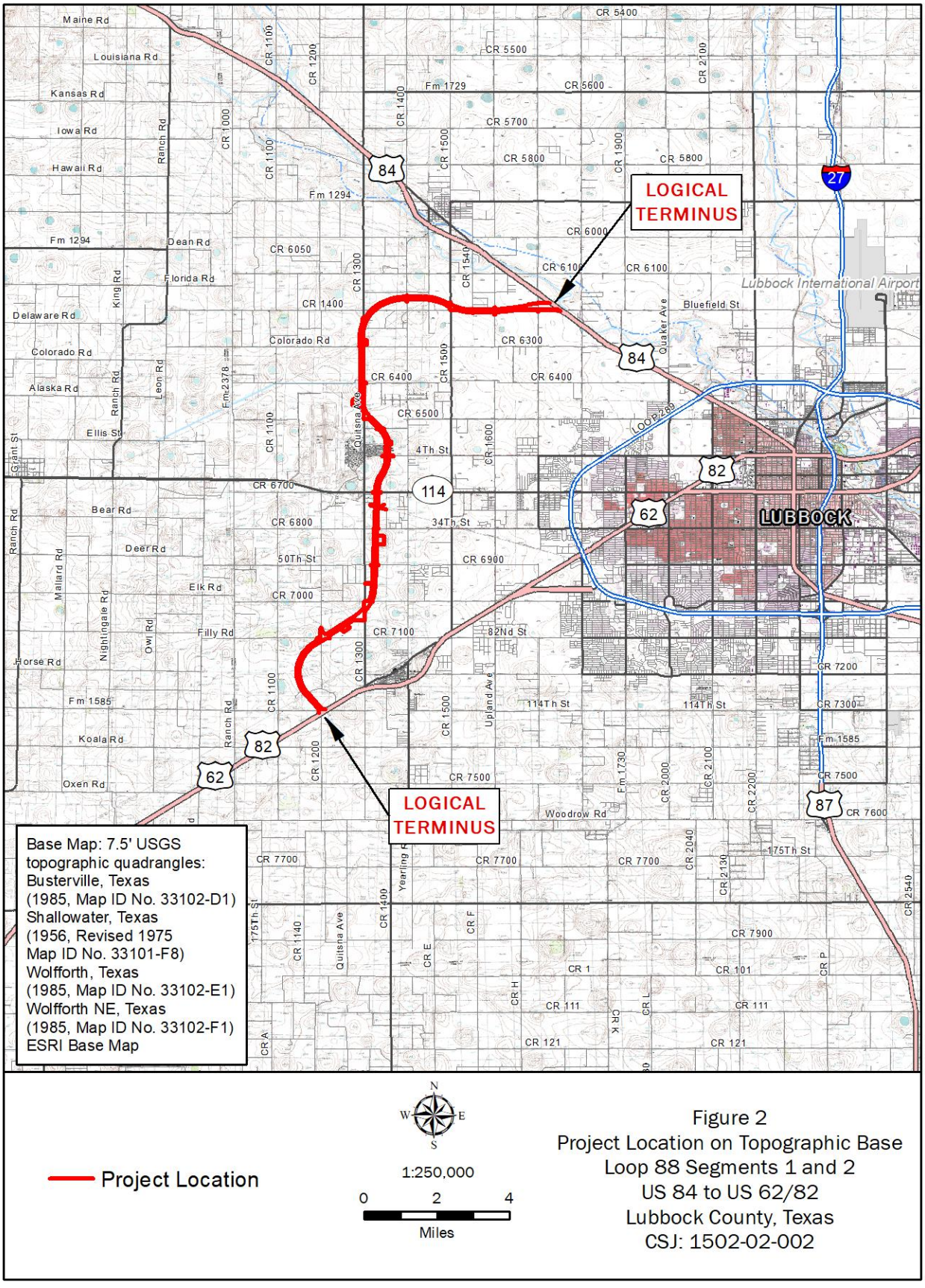


Figure 1
Project Location on County Map
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002

Figures


LOGICAL TERMINUS
LOGICAL TERMINUS
LUBBOCK
Lubbock International Airport
Base Map: 7.5' USGS topographic quadrangles:
Busterville, Texas
(1985, Map ID No. 33102-D1)
Shallowater, Texas
(1956, Revised 1975
Map ID No. 33101-F8)
Wolfforth, Texas
(1985, Map ID No. 33102-E1)
Wolfforth NE, Texas
(1985, Map ID No. 33102-F1)
ESRI Base Map
Project Location
1:250,000
0 2 4
Miles
Figure 2
Project Location on Topographic Base
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002


County Road 1200
1585
MATCHLINE
62
County Road 1300
County Road 7300
Work to be constructed by others
1:7,200
0 300 600
Feet
Figure 3.1
Ecological Mapping Systems of Texas
(EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


MATCHLINE
1585
MATCHLINE
Proposed Right-of-way
CRP / Other Improved Grassland
Row Crops
Work to be constructed by others
1:7,200
0
300
600
Feet
Figure 3.2
Ecological Mapping Systems of Texas
(EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


County Road 1200
County Road 7100
MATCHLINE
MATCHLINE
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
Barren
CRP / Other Improved Grassland
High Plains: Playa Grassland
High Plains: Playa Lake
High Plains: Shortgrass Prairie
Rolling Plains: Mixedgrass Prairie
Row Crops
1:7,200
0 300 600
Feet
Figure 3.3
Ecological Mapping Systems of Texas (EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas

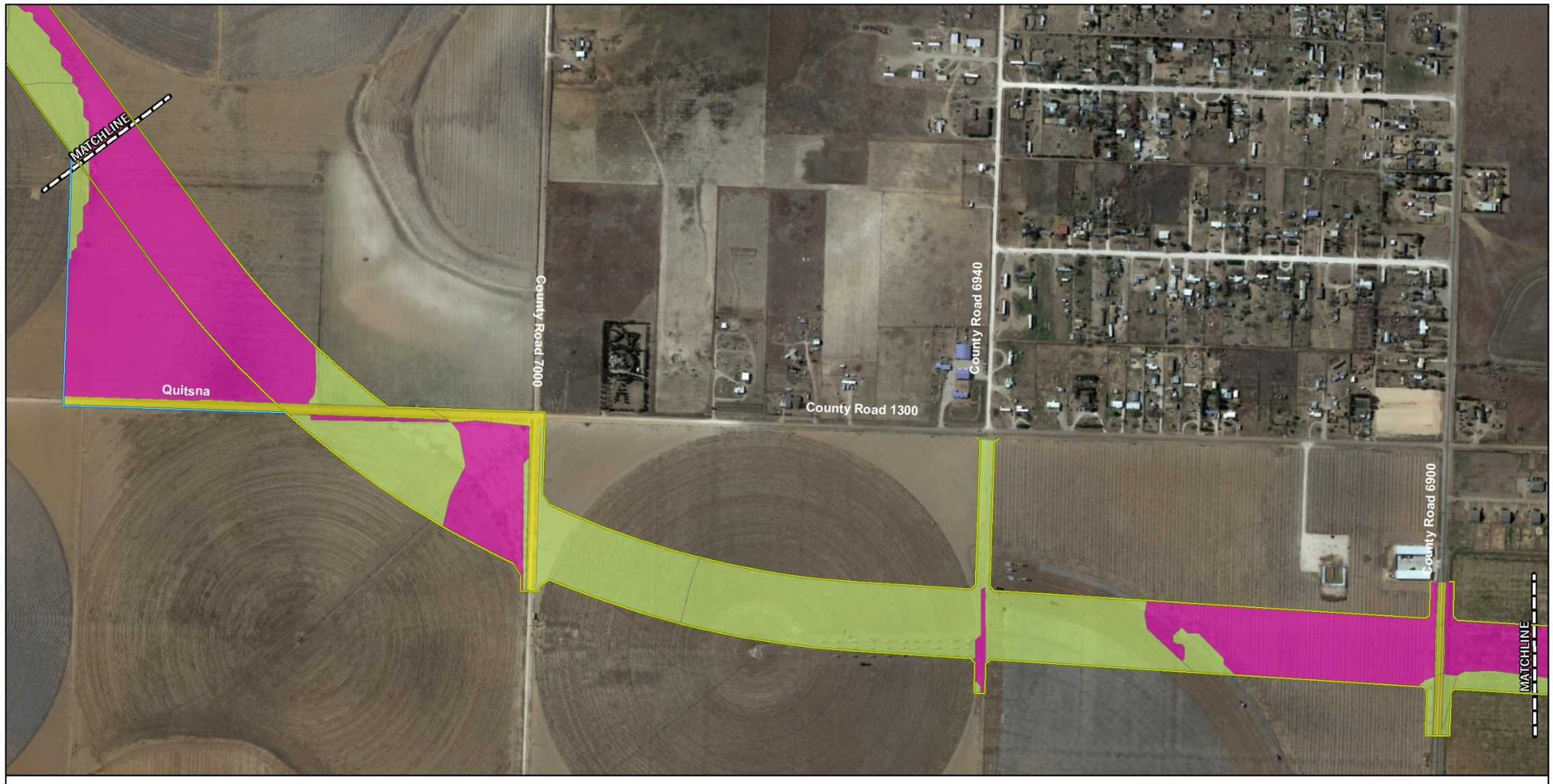
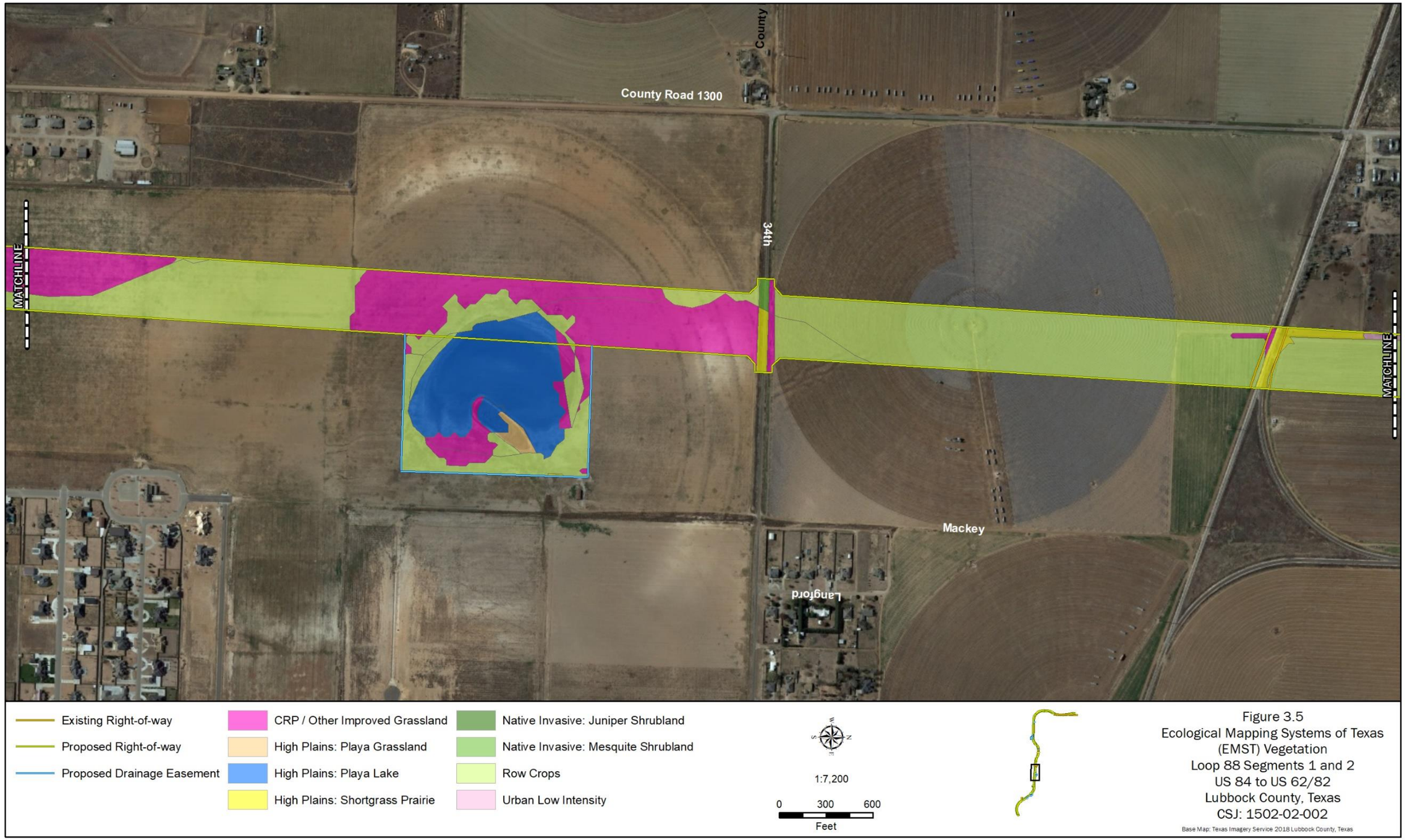


Figure 3.4
Ecological Mapping Systems of Texas (EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002

Base Map: Texas Imagery Service 2018 Lubbock County, Texas


County Road 1300
County
34th
MATCHLINE
MATCHLINE
Mackey
Langford
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
CRP / Other Improved Grassland
High Plains: Playa Grassland
High Plains: Playa Lake
High Plains: Shortgrass Prairie
Native Invasive: Juniper Shrubland
Native Invasive: Mesquite Shrubland
Row Crops
Urban Low Intensity
1:7,200
0 300 600
Feet
Figure 3.5
Ecological Mapping Systems of Texas
(EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


County Road 1300
MATCHLINE
114
2255
MATCHLINE
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
CRP / Other Improved Grassland
High Plains: Playa Lake
High Plains: Shortgrass Prairie
Native Invasive: Juniper Shrubland
Row Crops
Urban High Intensity
Urban Low Intensity
1:7,200
0 300 600
Feet
Figure 3.6
Ecological Mapping Systems of Texas
(EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas

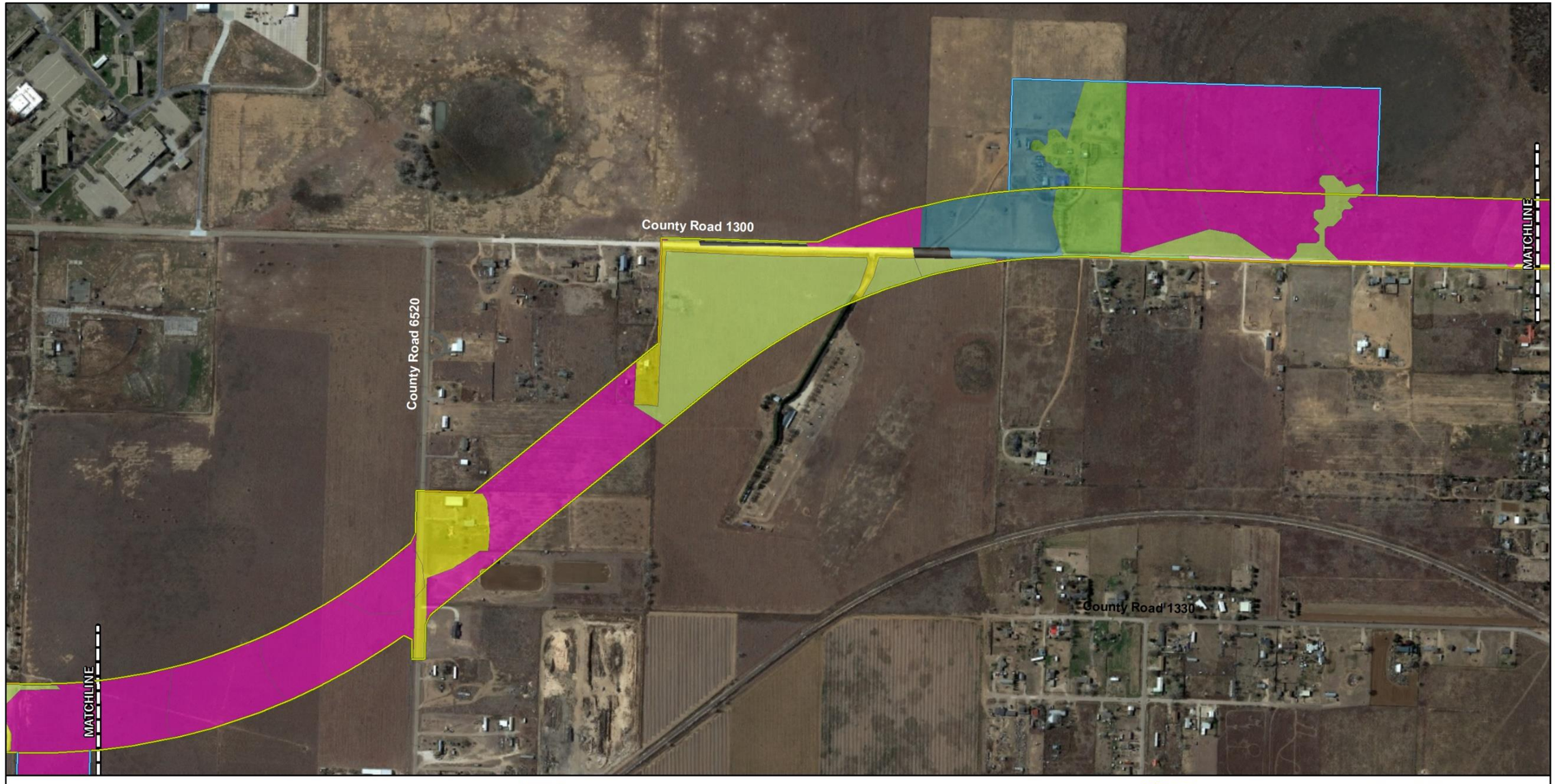


Figure 3.7
Ecological Mapping Systems of Texas (EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002

Base Map: Texas Imagery Service 2018 Lubbock County, Texas


MATCHLINE
County Road 1300
Colorado
MATCHLINE
County Road 6400
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
CRP / Other Improved Grassland
High Plains: Shortgrass Prairie
Native Invasive: Mesquite Shrubland
Rolling Plains: Mixedgrass Prairie
Row Crops
Urban Low Intensity
1:7,200
0 300 600
Feet
Figure 3.8
Ecological Mapping Systems of Texas
(EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas

Figures


MATCHLINE
179
County Road 2641
County Road 1300
MATCHLINE
Proposed Right-of-way
Barren
CRP / Other Improved Grassland
High Plains: Shortgrass Prairie
Native Invasive: Mesquite Shrubland
Row Crops
N
W
E
S
1:7,200
0
300
600
Feet
Figure 3.9
Ecological Mapping Systems of Texas
(EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas

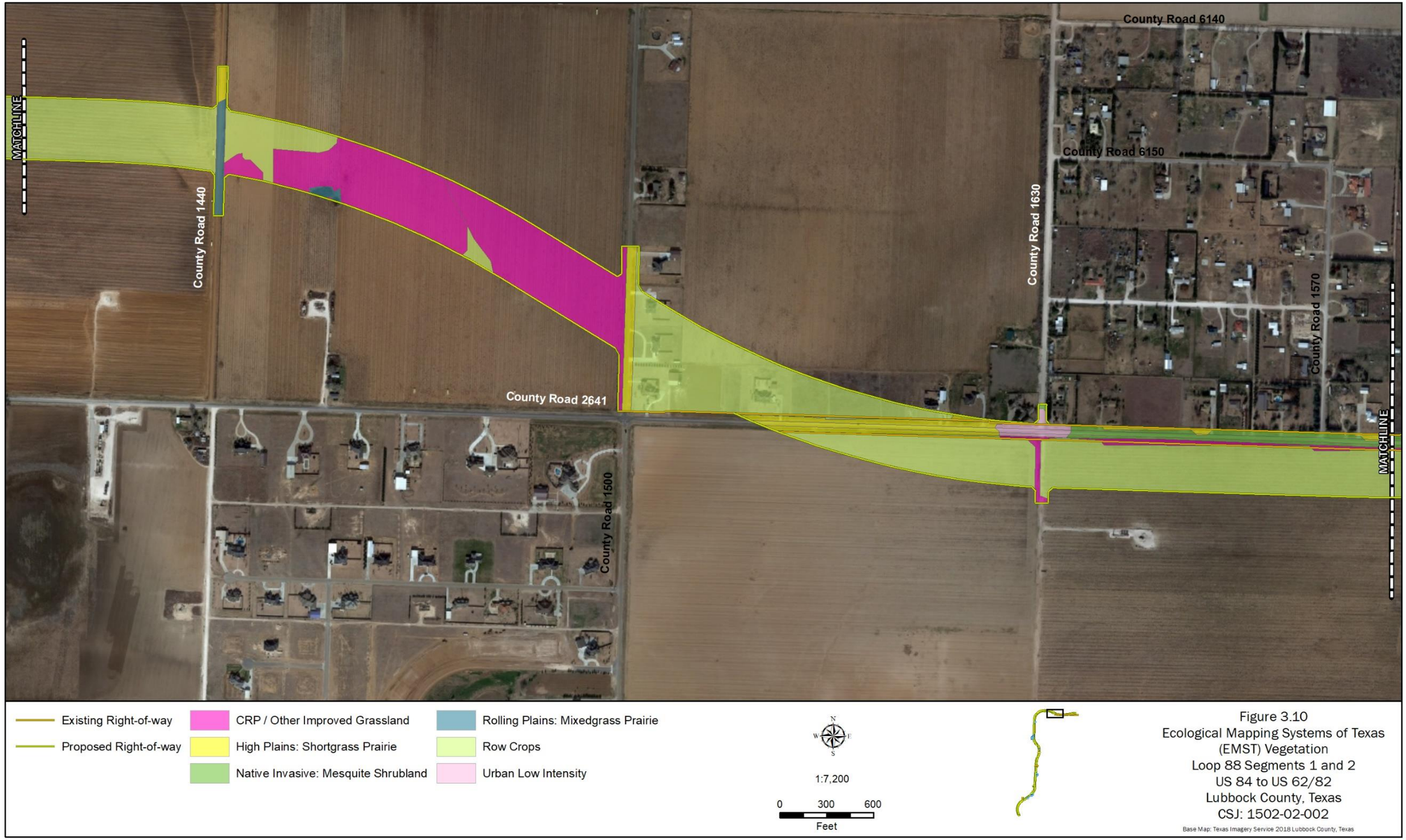
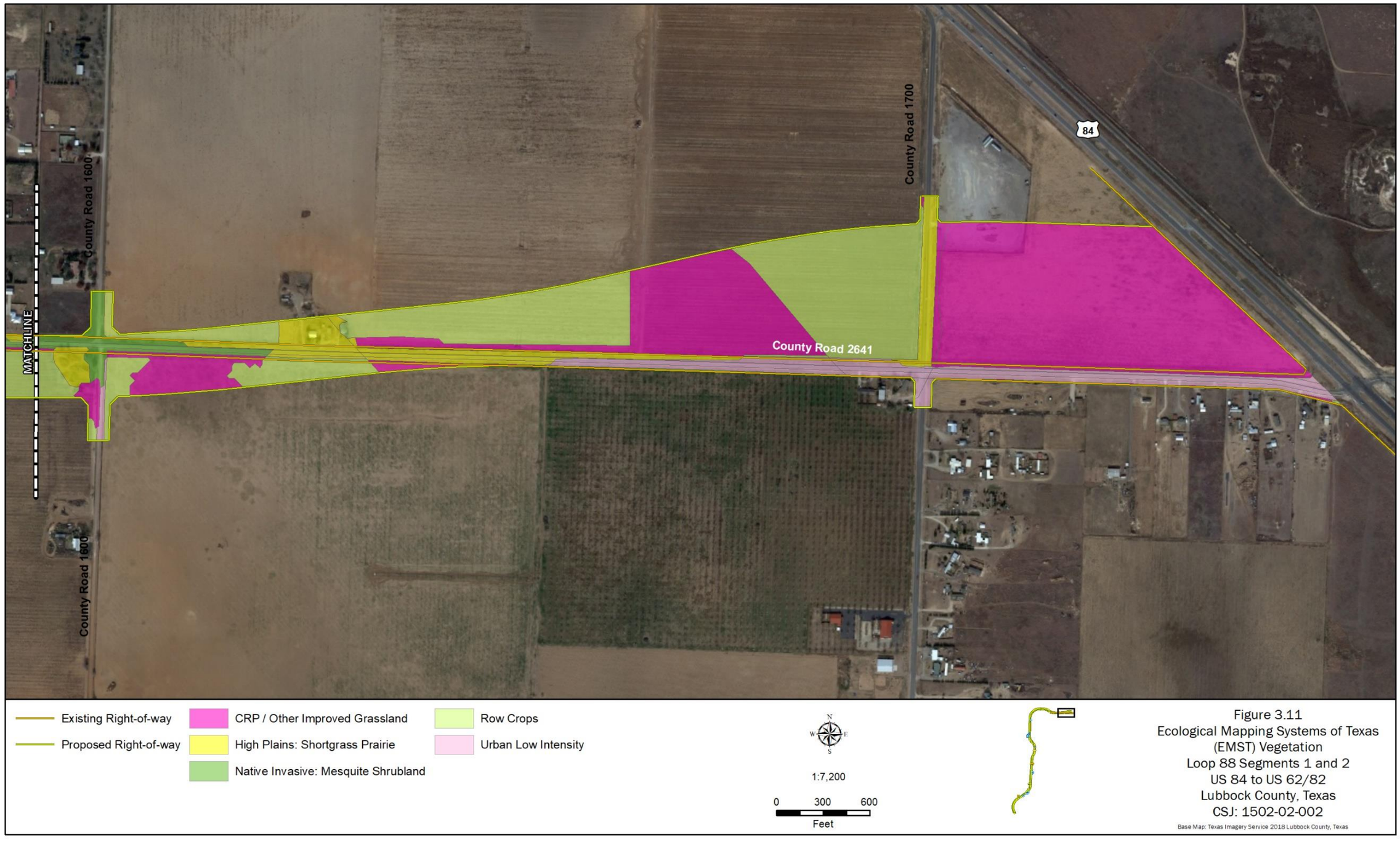


Figure 3.10
Ecological Mapping Systems of Texas
(EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002

Base Map: Texas Imagery Service 2018 Lubbock County, Texas

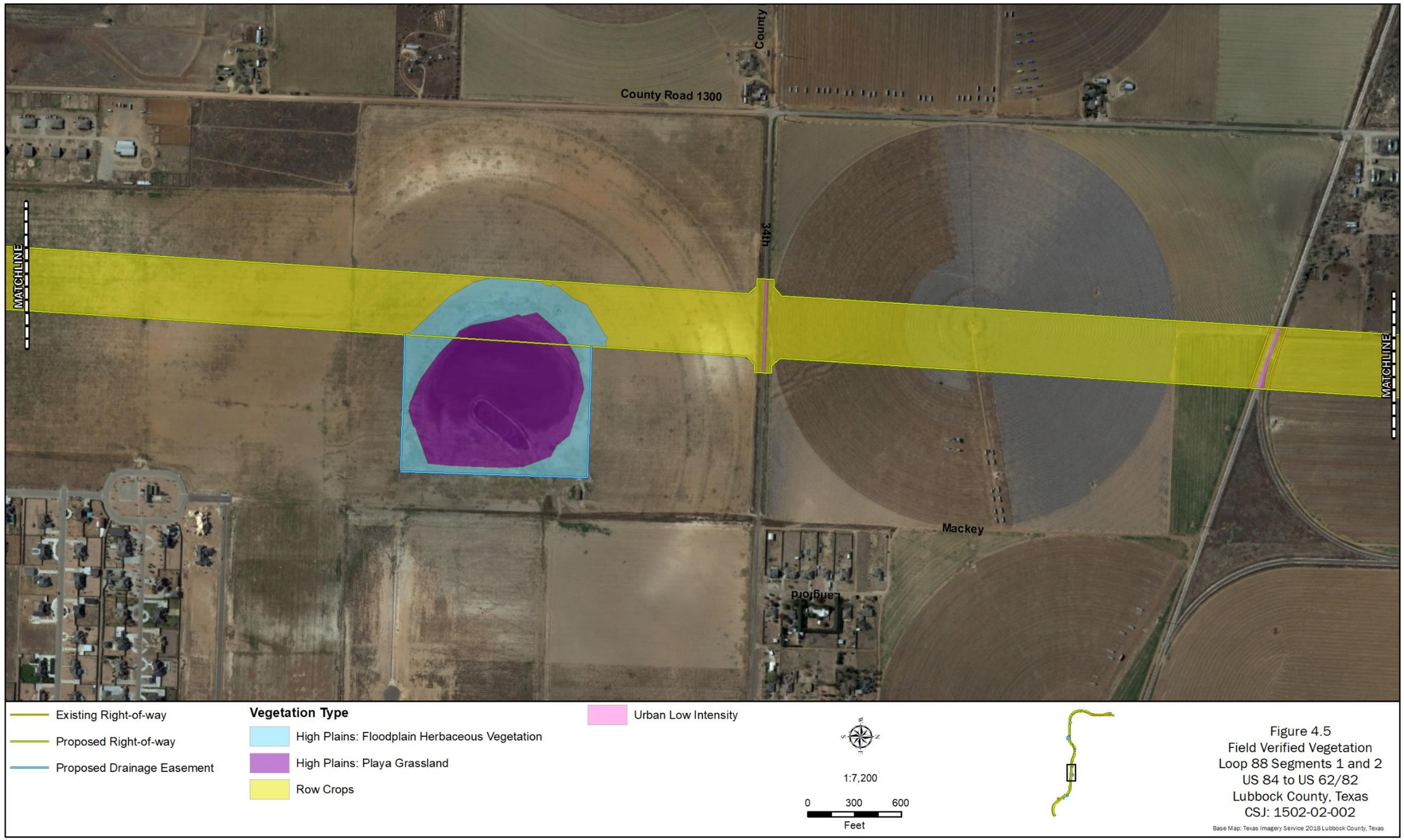

County Road 1600
County Road 1700
84
MATCHLINE
County Road 2641
County Road 1600
Existing Right-of-way
Proposed Right-of-way
CRP / Other Improved Grassland
High Plains: Shortgrass Prairie
Native Invasive: Mesquite Shrubland
Row Crops
Urban Low Intensity
N
W
E
S
1:7,200
0
300
600
Feet
Figure 3.11
Ecological Mapping Systems of Texas
(EMST) Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas

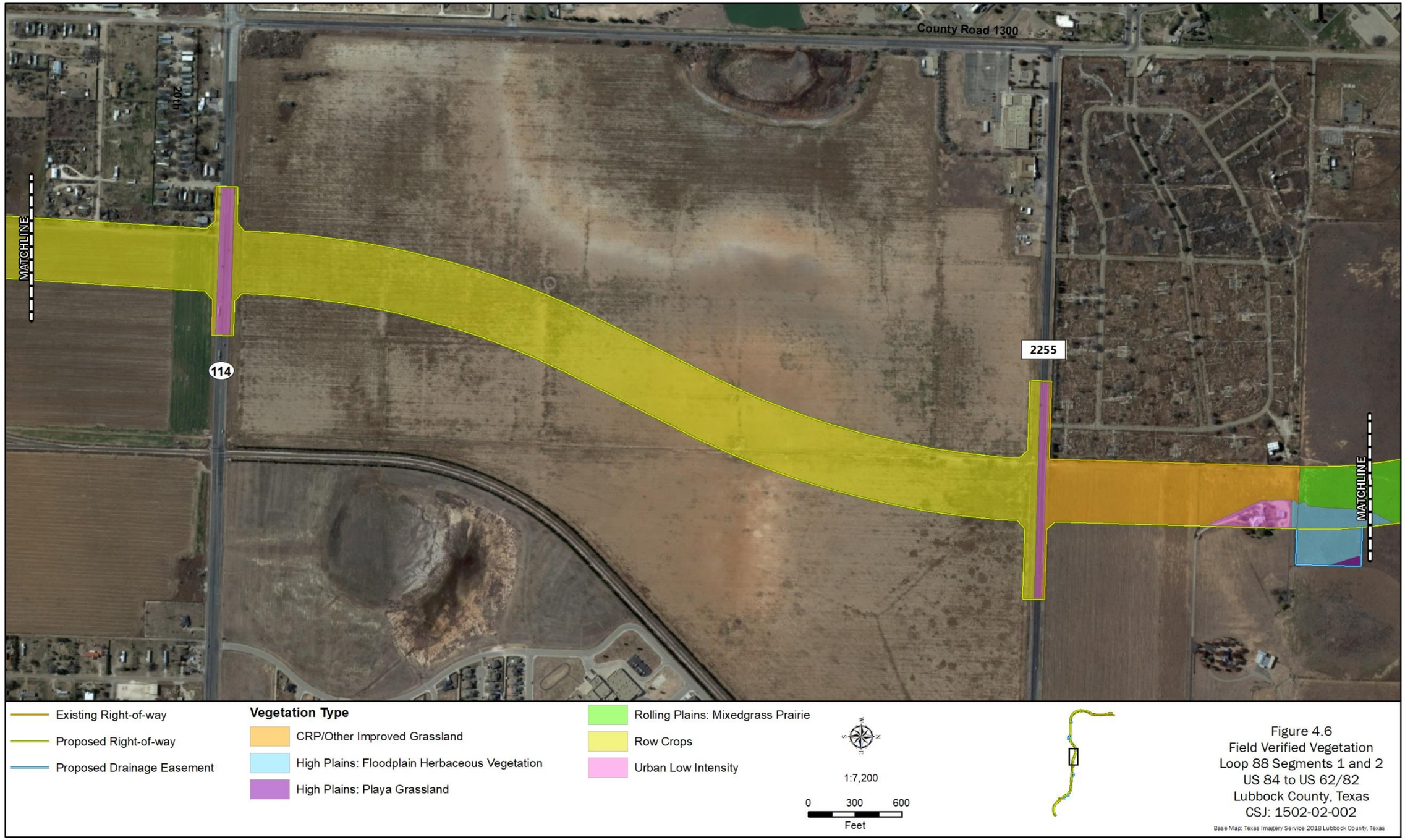

County Road 1200
1585
MATCHLINE
62
County Road 1300
County Road 7390
Work to be constructed by others
1:7,200
0 300 600
Feet
Figure 4.1
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas

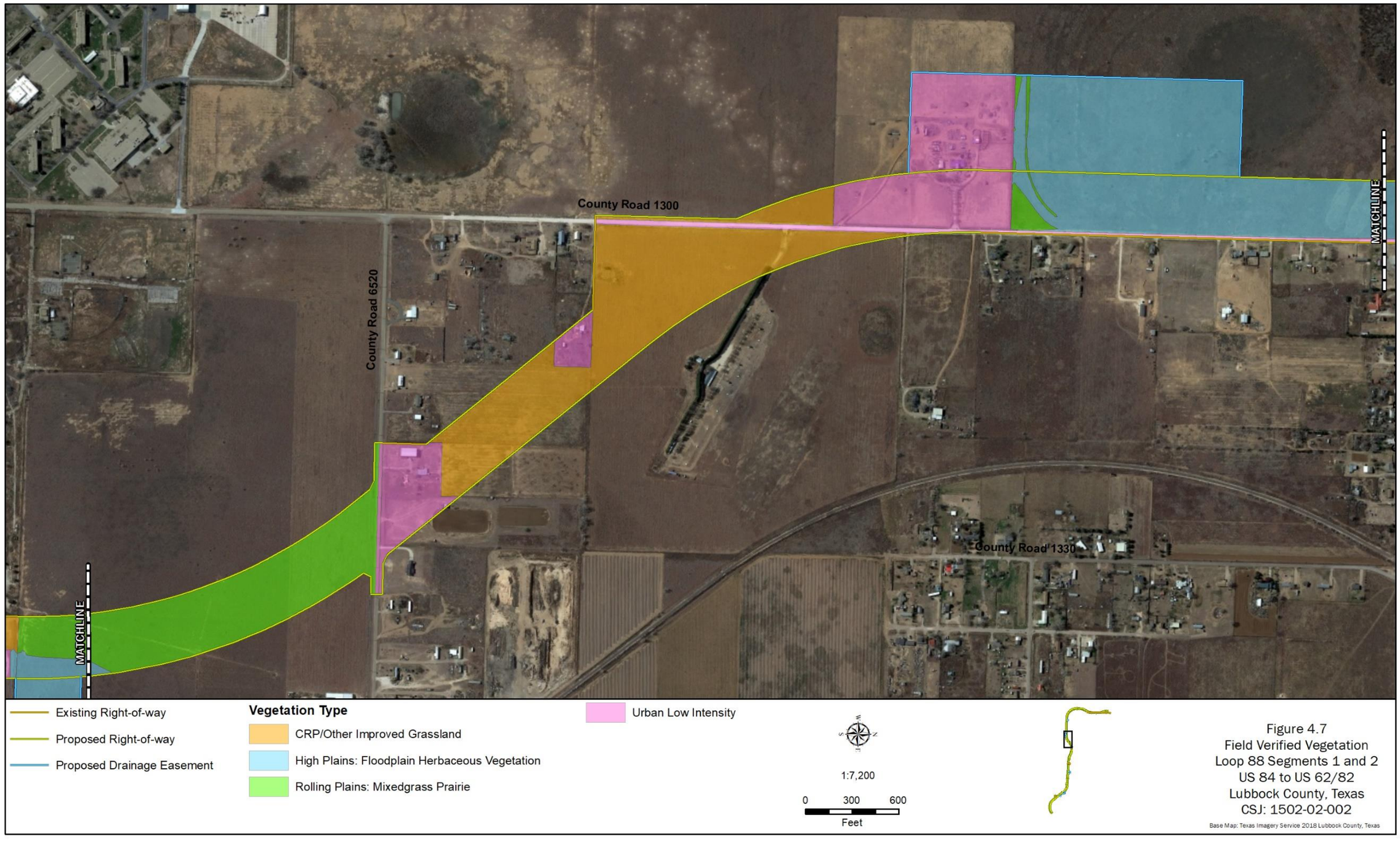

MATCHLINE
1585
MATCHLINE
Proposed Right-of-way
Work to be constructed by others
Vegetation Type
Row Crops
1:7,200
0 300 600
Feet
Figure 4.2
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


County Road 1200
County Road 7100
MATCHLINE
MATCHLINE
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
Vegetation Type
High Plains: Floodplain Herbaceous Vegetation
High Plains: Playa Grassland
Row Crops
Urban Low Intensity
1:7,200
0 300 600
Feet
Figure 4.3
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


MATCHLINE
Quitsna
County Road 7000
County Road 1300
County Road 6940
County Road 6900
MATCHLINE
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
Vegetation Type
High Plains: Floodplain Herbaceous Vegetation
Row Crops
Urban Low Intensity
1:7,200
0 300 600
Feet
Figure 4.4
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas

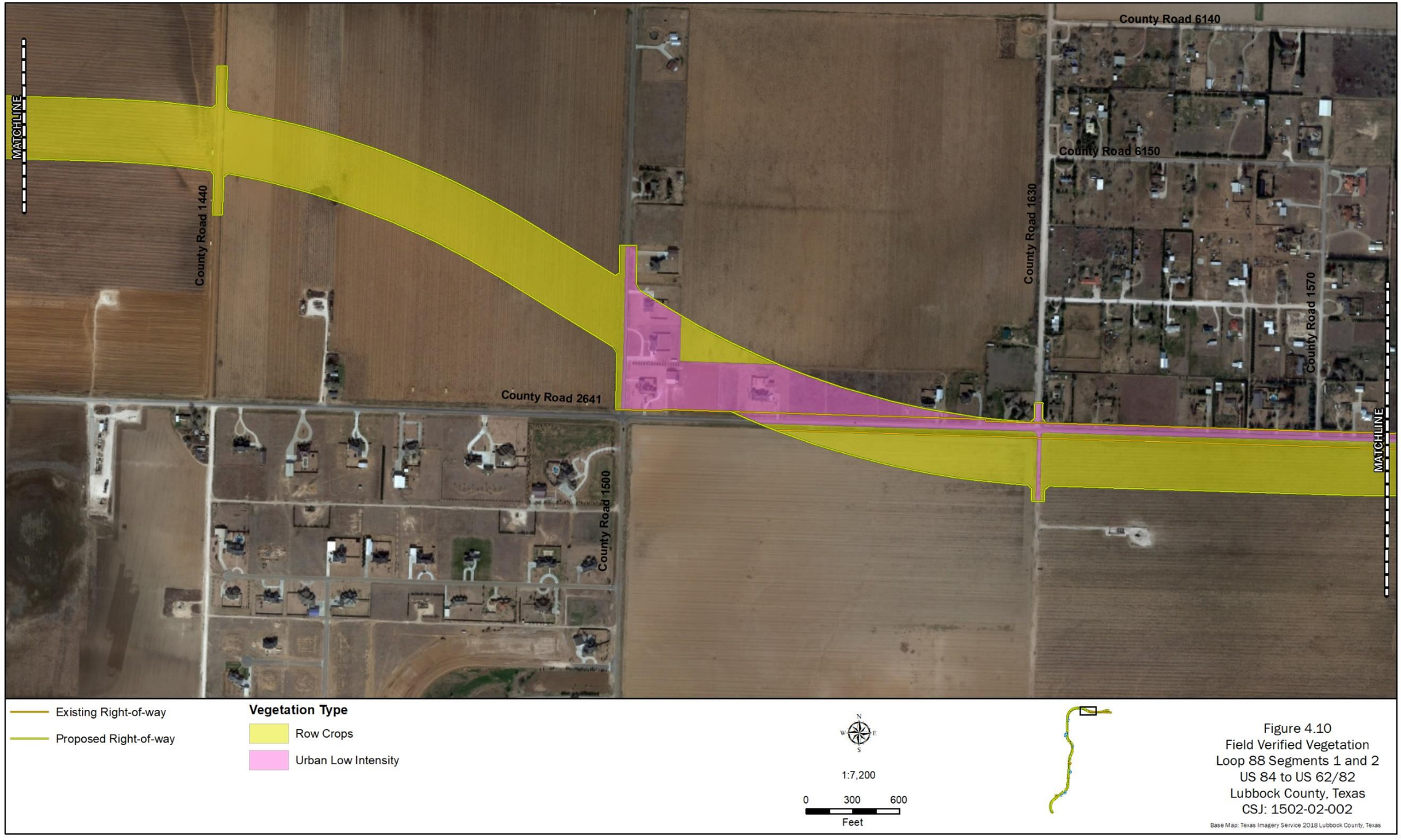

County Road 1300
County
34th
MATCHLINE
MATCHLINE
Mackey
Langford
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
Vegetation Type
High Plains: Floodplain Herbaceous Vegetation
High Plains: Playa Grassland
Row Crops
Urban Low Intensity
1:7,200
0 300 600
Feet
Figure 4.5
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas

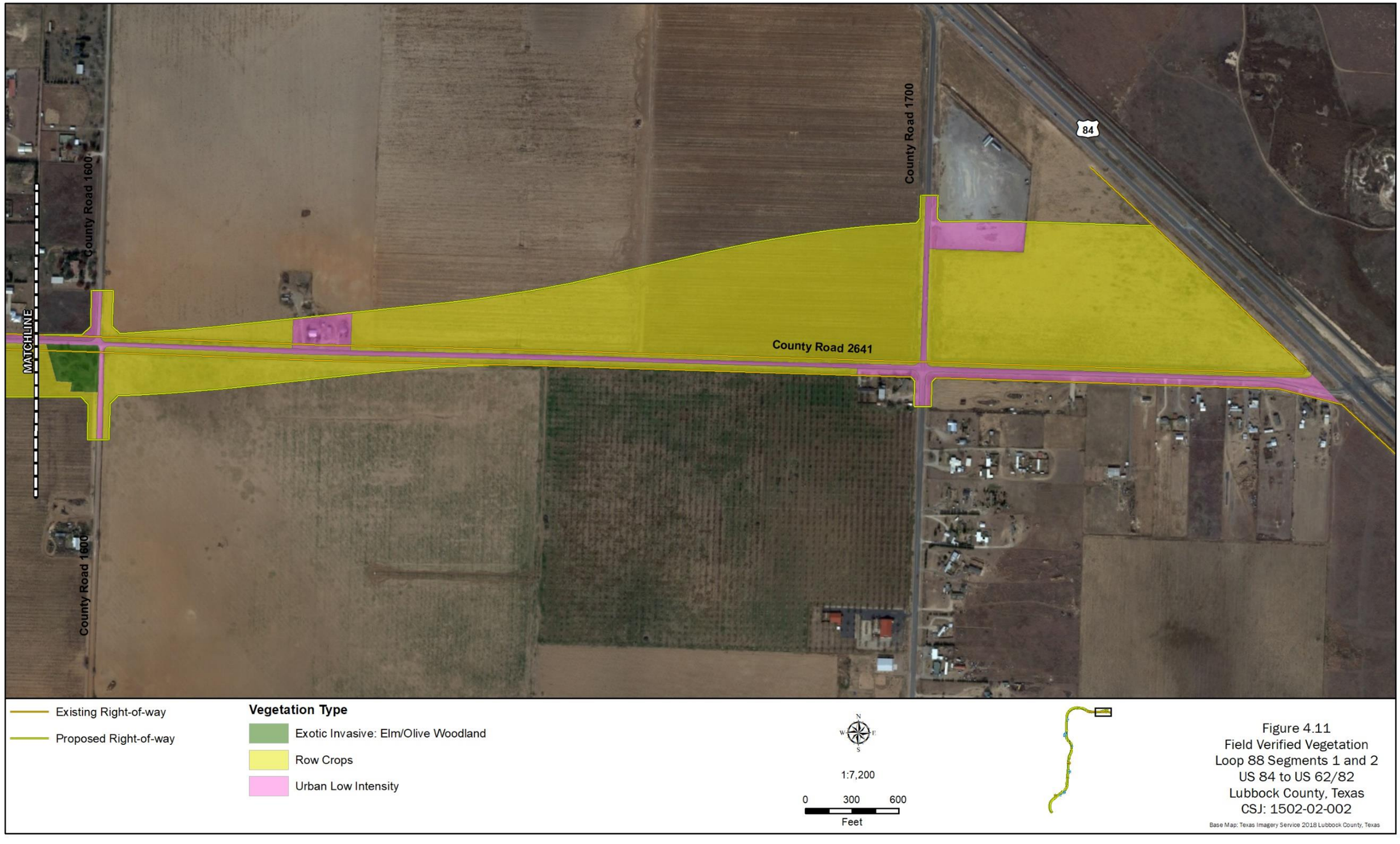

County Road 1300
20th
MATCHLINE
114
2255
MATCHLINE
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
Vegetation Type
CRP/Other Improved Grassland
High Plains: Floodplain Herbaceous Vegetation
High Plains: Playa Grassland
Rolling Plains: Mixedgrass Prairie
Row Crops
Urban Low Intensity
1:7,200
0 300 600
Feet
Figure 4.6
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


County Road 1300
County Road 6520
County Road 1330
MATCHLINE
MATCHLINE
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
Vegetation Type
CRP/Other Improved Grassland
High Plains: Floodplain Herbaceous Vegetation
Rolling Plains: Mixedgrass Prairie
Urban Low Intensity
1:7,200
0 300 600
Feet
Figure 4.7
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


MATCHLINE
County Road 6400
County Road 1300
Colorado
MATCHLINE
Existing Right-of-way
Proposed Right-of-way
Proposed Drainage Easement
Vegetation Type
High Plains: Floodplain Herbaceous Vegetation
High Plains: Playa Grassland
Rolling Plains: Mixedgrass Prairie
Row Crops
Urban Low Intensity
1:7,200
0 300 600
Feet
Figure 4.8
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


County Road 1300
County Road 2641
179
MATCHLINE
MATCHLINE
Proposed Right-of-way
Vegetation Type
High Plains: Floodplain Herbaceous Vegetation
Row Crops
Urban Low Intensity
N
W
E
S
1:7,200
0
300
600
Feet
Figure 4.9
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


MATCHLINE
County Road 1440
County Road 2641
County Road 1500
County Road 6140
County Road 6150
County Road 1630
County Road 1570
MATCHLINE
Existing Right-of-way
Proposed Right-of-way
Vegetation Type
Row Crops
Urban Low Intensity
N
W
E
S
1:7,200
0 300 600
Feet
Figure 4.10
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas


County Road 1600
County Road 1700
84
MATCHLINE
County Road 2641
County Road 1600
Existing Right-of-way
Proposed Right-of-way
Vegetation Type
Exotic Invasive: Elm/Olive Woodland
Row Crops
Urban Low Intensity
N
W
E
S
1:7,200
0
300
600
Feet
Figure 4.11
Field Verified Vegetation
Loop 88 Segments 1 and 2
US 84 to US 62/82
Lubbock County, Texas
CSJ: 1502-02-002
Base Map: Texas Imagery Service 2018 Lubbock County, Texas

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arlington Ecological Services Field Office
2005 Ne Green Oaks Blvd
Suite 140
Arlington, TX 76006-6247
Phone: (817) 277-1100 Fax: (817) 277-1129
http://www.fws.gov/southwest/es/arlingtontexas/
http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

In Reply Refer To: September 27, 2019
Consultation Code: 02ETAR00-2019-SLI-0714
Event Code: 02ETAR00-2019-E-04965
Project Name: Loop 88 Segments 1 and 2

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, which may occur within the boundary of your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For Federal actions other than major construction activities, the Service suggests that a biological evaluation (similar to a Biological Assessment) be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action, and the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy

guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arlington Ecological Services Field Office
2005 Ne Green Oaks Blvd
Suite 140
Arlington, TX 76006-6247
(817) 277-1100

Project Summary

Consultation Code: 02ETAR00-2019-SLI-0714

Event Code: 02ETAR00-2019-E-04965

Project Name: Loop 88 Segments 1 and 2

Project Type: TRANSPORTATION

Project Description: New location outer loop around Lubbock

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.56465452342589N102.02125754471179W

Counties: Lubbock, TX

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 5 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Least Tern *Sterna antillarum*	Endangered

Population: interior pop.
No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:
- Wind Energy Projects

Species profile: https://ecos.fws.gov/ecp/species/8505

Piping Plover *Charadrius melodus*	Threatened

Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.
There is **final** critical habitat for this species. Your location is outside the critical habitat.
This species only needs to be considered under the following conditions:
- Wind Energy Projects

Species profile: https://ecos.fws.gov/ecp/species/6039

Red Knot *Calidris canutus rufa*	Threatened

No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:
- Wind Energy Projects

Species profile: https://ecos.fws.gov/ecp/species/1864

Whooping Crane *Grus americana*	Endangered

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/758

Fishes

NAME	STATUS
Sharpnose Shiner *Notropis oxyrhynchus*	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
This species only needs to be considered under the following conditions:
- All reservoir projects; in-channel projects such as interbasin transfers, water diversions, small impoundments, etc. that may reduce flows of major tributaries eventually flowing into occupied habitat; commercial/industrial well field projects.

Species profile: https://ecos.fws.gov/ecp/species/6492

Smalleye Shiner *Notropis buccula*	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
This species only needs to be considered under the following conditions:
- All reservoir projects; in-channel projects such as interbasin transfers, water diversions, small impoundments, etc. that may reduce flows of major tributaries eventually flowing into occupied habitat; commercial/industrial well field projects.

Species profile: https://ecos.fws.gov/ecp/species/1774

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Last Update: 7/17/2019

LUBBOCK COUNTY

AMPHIBIANS

Woodhouse's toad *Anaxyrus woodhousii*

Extremely catholic up to 5000 feet, does very well (except for traffic) in association with man.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: SU

BIRDS

bald eagle *Haliaeetus leucocephalus*

Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3B,S3N

black rail *Laterallus jamaicensis*

Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: PT	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

common black-hawk *Buteogallus anthracinus*

Cottonwood-lined rivers and streams; willow tree groves on the lower Rio Grande floodplain; formerly bred in south Texas

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S2B

Franklin's gull *Leucophaeus pipixcan*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S2N

mountain plover *Charadrius montanus*

Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

LUBBOCK COUNTY

BIRDS

western burrowing owl *Athene cunicularia hypugaea*

Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T4	State Rank: S2

white-faced ibis *Plegadis chihi*

Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G3G4	State Rank: SNR

No accepted common name *Eupseudomorpha brillians*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: GNR	State Rank: SNR

MAMMALS

American badger *Taxidea taxus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

big brown bat *Eptesicus fuscus*

Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

LUBBOCK COUNTY

MAMMALS

big free-tailed bat *Nyctinomops macrotis*

Habitat data sparse but records indicate that species prefers to roost in crevices and cracks in high canyon walls, but will use buildings, as well; reproduction data sparse, gives birth to single offspring late June-early July; females gather in nursery colonies; winter habits undetermined, but may hibernate in the Trans-Pecos; opportunistic insectivore

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G5	State Rank: S3

black-tailed prairie dog *Cynomys ludovicianus*

Dry, flat, short grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle; live in large family groups

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

cave myotis bat *Myotis velifer*

Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (Hirundo pyrrhonota) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S4

eastern red bat *Lasiurus borealis*

Found in a variety of habitats in Texas. Usually associated with wooded areas. Found in towns especially during migration.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

eastern spotted skunk *Spilogale putorius*

Catholic; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1S3

hoary bat *Lasiurus cinereus*

Known from montane and riparian woodland in Trans-Pecos, forests and woods in east and central Texas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

long-tailed weasel *Mustela frenata*

Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

LUBBOCK COUNTY

MAMMALS

Mexican free-tailed bat *Tadarida brasiliensis*

Roosts in buildings in east Texas. Largest maternity roosts are in limestone caves on the Edwards Plateau. Found in all habitats, forest to desert.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

mountain lion *Puma concolor*

Rugged mountains & riparian zones.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2S3

plains spotted skunk *Spilogale putorius interrupta*

Catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G4T4	State Rank: S1S3

prairie vole *Microtus ochrogaster taylori*

Extreme northern Panhandle; colonial; upland herbaceous fields; grasslands, old agricultural lands and thickets; places where there is suitable cover for runways; floodplains of rivers serve as dispersal routes; railroad and highway right-of-ways may serve as corridors for dispersal; nests in burrows, under boards or logs, and above ground in grassy clumps; breeds year-round, esp. spring/fall; peaks depend on availability of moisture

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5T3T4	State Rank: S1

pronghorn *Antilocapra americana*

Prefers hilly & plateau areas of open grassland, desert-grassland, & desert-scrub, where it frequents south-facing slopes & other sheltered areas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

swift fox *Vulpes velox*

Restricted to current and historic shortgrass prairie. Open deserts or grasslands; sparsely vegetated habitats; western and northern portions of Panhandle.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S1

thirteen-lined ground squirrel *Ictidomys tridecemlineatus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

LUBBOCK COUNTY

MAMMALS

Townsend's big-eared bat *Corynorhinus townsendii*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3?

tricolored bat *Perimyotis subflavus*

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S3S4

western hog-nosed skunk *Conepatus leuconotus*

Habitats include woodlands, grasslands & deserts, to 7200 feet, most common in rugged, rocky canyon country; little is known about the habitat of the ssp. telmalestes

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

REPTILES

common garter snake *Thamnophis sirtalis*

Irrigation canals and riparian-corridor farmlands in west; marshy, flooded pastureland, grassy or brushy borders of permanent bodies of water; coastal salt marshes.

Federal Status:	State Status:	SGCN: N
Endemic:	Global Rank: G5	State Rank: S2

eastern box turtle *Terrapene carolina*

Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures. In Maryland bottomland forest, some hibernated in pits or depressions in forest floor (usually about 30 cm deep) usually within summer range; individuals tended to hibernate in same area in different years (Stickel 1989). Also attracted to farms, old fields and cut-over woodlands, as well as creek bottoms and dense woodlands. Egg laying sites often are sandy or loamy soils in open areas; females may move from bottomlands to warmer and drier sites to nest. In Maryland, females used the same nesting area in different years (Stickel 1989).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

keeled earless lizard *Holbrookia propinqua*

Coastal dunes, barrier islands, and other sandy areas; eats insects and likely other small invertebrates; eggs laid underground March-September (most May-August)

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

LUBBOCK COUNTY

REPTILES

massasauga *Sistrurus tergeminus*

Quite common in gently rolling prairie occasionally broken by creek valley or rocky hillside.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3S4

Texas horned lizard *Phrynosoma cornutum*

Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area. Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

Texas map turtle *Graptemys versa*

Rivers with moderate current, abundant aquatic vegetation, and basking logs; also associated oxbows and lakes (Bartlett and Bartlett 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G4	State Rank: SU

western box turtle *Terrapene ornata*

Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species; winter burrow depth was 0.5-1.8 meters in Wisconsin (Doroff and Keith 1990), 7-120 cm (average depth 54 cm) in Nebraska (Converse et al. 2002). Eggs are laid in nests dug in soft well-drained soil in open area (Legler 1960, Converse et al. 2002). Very partial to sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

western hognose snake *Heterodon nasicus*

Habitat consists of areas with sandy or gravelly soils, including prairies, sandhills, wide valleys, river floodplains, bajadas, semiagricultural areas (but not intensively cultivated land), and margins of irrigation ditches (Degenhardt et al. 1996, Hammerson 1999, Werler and Dixon 2000, Stebbins 2003). Also thornscrub woodlands and chaparral thickets. Seems to prefer sandy and loamy soils, not necessarily flat. Periods of inactivity are spent burrowed in the soil or in existing burrows. Eggs are laid in nests a few inches below the ground surface (Platt 1969).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

western rattlesnake *Crotalus viridis*

Grassland, both desert and prairie; shrub desert rocky hillsides; edges of arid and semi-arid river breaks.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

LUBBOCK COUNTY

PLANTS

Cory's ephedra *Ephedra coryi*

Dune areas and dry grasslands in the southern Plains Country; Perennial; Flowering April-Sept; Fruiting May-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Mexican mud-plantain *Heteranthera mexicana*

Wet clayey soils of resacas and ephemeral wetlands in South Texas and along margins of playas in the Panhandle; flowering June-December, only after sufficient rainfall

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S1

Species Impact Table

Federal and State-listed Threatened and Endangered Species and Species of Greatest Conservation Need (SGCN) in Lubbock County, Texas

Species	Federal Status	State Status	Description of Suitable Habitat	Species Impact/Effect	Specific Project Information
AMPHIBIANS					
Woodhouse's Toad *Anaxyrus woodhousii*	—	SGCN	Extremely catholic up to 5000 feet, does very well (except for traffic) in association with man.	May impact	Based on the generalist nature of the species, presence of the species cannot be ruled out.
BIRDS					
Bald Eagle *Haliaeetus leucocephalus*	—	T	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds.	No impact	No rivers or large lakes are present within or adjacent to the project area, and no suitable habitat is present.
Black Rail[1] *Laterallus jamaicensis*	PT	SGCN	Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia.	No effect	No marshes, pond borders, wet meadows, or grassy swamps occur in or adjacent to the project area.
Common Black-hawk *Buteogallus anthracinus*	—	T	Cottonwood-lined rivers and streams; willow tree groves on the lower Rio Grande floodplain; formerly bred in south Texas.	No impact	No cottonwood-lined rivers or streams occur in or adjacent to the project area.
Franklin's Gull *Leucophaeus pipixcan*	—	SGCN	Nonbreeding: seacoasts, bays, estuaries, lakes, rivers, marshes, ponds, and irrigated fields; mudflats. Nests in fresh-water marshes, shores of inland lakes, in areas of prairie and steppe. Nest is made of dead marsh plants; it is often a floating structure anchored to a living plant stem.	No impact	No mudflats associated with seacoasts, bays, estuaries, lakes, rivers, marshes, ponds, or irrigated fields are present in or near the project area.
Interior Least Tern *Sternula antillarum athalassos*	E	E	Nests on sand and gravel bars within braided streams and rivers; also known to nest on manmade structures (inland beaches, wastewater treatment plants, gravel mines).	No effect	No suitable water features are present within or adjacent to the project area. Additionally, this species only needs to be considered for wind energy projects according to USFWS.
Mountain Plover *Charadrius montanus*	—	SGCN	Shortgrass plains or prairies and bare, dirt fields. Nests on high plains or shortgrass prairie, on ground in shallow depression.	May impact	Shortgrass plains or prairies and bare, dirt fields are present in and adjacent to the project area.
Piping Plover *Charadrius melodus*	T	T	Wintering migrant along the Texas Gulf Coast; beaches and bayside mud or salt flats.	No effect	No beaches or bayside mud or salt flats occur within or adjacent to the project area. Additionally, this species only needs to be considered for wind energy projects according to USFWS.

Species Impact Table

Federal and State-listed Threatened and Endangered Species and Species of Greatest Conservation Need (SGCN) in Lubbock County, Texas

Species	Federal Status	State Status	Description of Suitable Habitat	Species Impact/Effect	Specific Project Information
Red Knot *Calidris canutus rufa*	T	SGCN	The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (*Donax* spp.) on beaches and dwarf surf clam (*Mulinia lateralis*) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy Counties. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and tidal flat/shore.	No effect	No suitable beaches, tidal flats, or other sea shoreline features occur within or adjacent to the project area. Additionally, this species only needs to be considered for wind energy projects according to USFWS.
Western Burrowing Owl *Athene cunicularia hypugaea*	—	SGCN	Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows.	May impact	Less disturbed areas (grasslands, prairies, and vacant lots) may provide potential habitat in project area. Bird BMPs will be implemented.
White-faced Ibis *Plegadis chihi*	—	T	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will use brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	No impact	No marshes, sloughs or rice fields are located within or adjacent to the project area.
Whooping Crane *Grus americana*	E	E	Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	No effect	No suitable migrant stopover habitat was identified in or adjacent to the project area.
FISHES					
Sharpnose Shiner *Notropis oxyrhynchus*	E	E[1]	Endemic to Brazos River drainage; also, apparently introduced into adjacent Colorado River drainage; large turbid river, with bottom a combination of sand, gravel, and clay-mud.	No effect	There is no suitable aquatic habitat within the project area. Additionally, according to USFWS, this species only needs to be considered under the following conditions: reservoir projects; in-channel projects such as interbasin transfers, water diversions, small impoundments, etc. that may reduce flows of major tributaries eventually flowing into occupied habitat; and commercial/industrial well field projects.

Species Impact Table

Federal and State-listed Threatened and Endangered Species and Species of Greatest Conservation Need (SGCN) in Lubbock County, Texas

Species	Federal Status	State Status	Description of Suitable Habitat	Species Impact/Effect	Specific Project Information
Smalleye Shiner *Notropis buccula*	E	E[1]	Endemic to upper Brazos River system and its tributaries (Clear Fork and Bosque); apparently introduced into adjacent Colorado River drainage; medium to large prairie streams with sandy substrate and turbid to clear warm water; presumably eats small aquatic invertebrates.	No effect	According to USFWS, this species only needs to be considered under the following conditions: reservoir projects; in-channel projects such as interbasin transfers, water diversions, small impoundments, etc. that may reduce flows of major tributaries eventually flowing into occupied habitat; and commercial/industrial well field projects.
MAMMALS					
American Badger *Taxidea taxus*	—	SGCN	Found in cropland/hedgerow, desert, grassland/herbaceous, savanna, and shrubland/chaparral habitats. Prefers open areas and may also frequent brushlands with little groundcover. When inactive, occupies underground burrow.	May impact	The project area contains croplands and other open areas that could provide habitat.
Big Brown Bat *Eptesicus fuscus*	—	SGCN	Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.	No impact	No riparian areas occur in the project area, and there is only one small fragmented patch of woodland.
Big Free-tailed Bat *Nyctinomops macrotis*	—	SGCN	Habitat data sparse but records indicate that species prefers to roost in crevices and cracks in high canyon walls, but will use buildings, as well; females gather in nursery colonies; winter habits undetermined, but may hibernate in the Trans-Pecos.	No impact	No suitable roosting or hibernating habitat is located in or adjacent to the project area.
Black-tailed Prairie Dog *Cynomys ludovicianus*	—	SGCN	Dry, flat, short grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle; live in large family groups.	May impact	There is suitable habitat within and adjacent to the project area, but no black-tailed prairie dog colonies were observed. Fossorial Mammal BMPs will be implemented.
Cave Myotis Bat *Myotis velifer*	—	SGCN	Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned cliff swallow (*Petrochelidon pyrrhonota*) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter.	No impact	No suitable roosting or hibernating habitat is located in the project area, and no bats or evidence of bats were observed in or near the project area.

Species Impact Table

Federal and State-listed Threatened and Endangered Species and Species of Greatest Conservation Need (SGCN) in Lubbock County, Texas

Species	Federal Status	State Status	Description of Suitable Habitat	Species Impact/Effect	Specific Project Information
Eastern Red Bat *Lasiurus borealis*	—	SGCN	Found in a variety of habitats in Texas. Usually associated with wooded areas. Found in towns especially during migration.	No impact	There is only one small, isolated patch of non-native woodland in the project area.
Eastern Spotted Skunk *Spilogale putorius*	—	SGCN	Catholic; open fields prairies, croplands, fence rows, farmyards, forest edges; woodlands. Prefer wooded, brushy areas; tallgrass prairies. *S.p.* ssp. *interrupta* found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.	May impact	Potential habitat is located within project area in open fields and croplands. Individuals may be disturbed, if present, but population-level impacts are not expected. Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered, and to avoid unnecessary impacts to dens.
Hoary Bat *Lasiurus cinereus*	—	SGCN	Known from montane and riparian woodland in Trans-Pecos, forests and woods in east and central Texas.	No impact	There is only one small, isolated patch of non-native woodland in the project area.
Long-tailed Weasel *Mustela frenata*	—	SGCN	Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges and rocky desert scrub. Usually live close to water.	No impact	The project area is near a developed urban area and is not near any perennial water bodies.
Mexican Free-tailed Bat *Tadarida brasiliensis*	—	SGCN	Roosts in buildings in east Texas. Largest maternity roosts are in limestone caves on the Edwards Plateau. Found in all habitats, forest to desert.	No impact	No known colonies or caves occur in or near the project area.
Mountain Lion *Puma concolor*	—	SGCN	Rugged mountains and riparian zones.	No impact	The project area is near a developed urban area and primarily consists of maintained ROW and crops.
Plains Spotted Skunk *Spilogale putorius interrupta*	—	SGCN	Open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie.	May impact	Potential habitat is located within project area in open fields and croplands. Individuals may be disturbed, if present, but population-level impacts are not expected. Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered, and to avoid unnecessary impacts to dens.

Species Impact Table

Federal and State-listed Threatened and Endangered Species and Species of Greatest Conservation Need (SGCN) in Lubbock County, Texas

Species	Federal Status	State Status	Description of Suitable Habitat	Species Impact/Effect	Specific Project Information
Prairie Vole *Microtus ochrogaster taylori*	—	SGCN	Extreme northern Panhandle; colonial; upland herbaceous fields; grasslands, old agricultural lands and thickets; places where there is suitable cover for runways; floodplains of rivers serve as dispersal routes; railroad and highway right-of-ways may serve as corridors for dispersal; nests in burrows, under boards or logs, and above ground in grassy clumps; breeds year-round, esp. spring/fall; peaks depend on availability of moisture.	May impact	Herbaceous fields, grasslands, and old agricultural lands could provide suitable habitat, and the presence of the species cannot be ruled out.
Pronghorn *Antilocapra americana*	—	SGCN	Prefers hilly and plateau areas of open grassland, desert-grassland; desert-scrub, where it frequents south-facing slopes; other sheltered areas.	No impact	The project area does not contain hills, plateaus, or desert.
Swift Fox *Vulpes velox*	—	SGCN	Restricted to current and historic shortgrass prairie; western and northern portions of Panhandle.	May impact	Relatively small areas of shortgrass prairie are present within the project area. Presence of the species cannot be ruled out.
Thirteen-lined Ground Squirrel *Ictidomys tridecemlineatus*	—	SGCN	Restricted to dry and sandy (and "tighter") soils of open areas, such as grasslands, cultivated fields, meadows, roadsides, airfields, shrublands, and suburb lawns. Beaches and dry pine barrens also used. Rests, gives birth, and hibernates in underground burrow.	No impact	No sandy soils occur in the project area.
Townsend's Big-eared Bat *Corynorhinus townsendii*	—	SGCN	Found in a broad range of habitats, but most commonly in mesic coniferous and deciduous forests. In Texas, habitat ranges from desert scrub to pinyon-juniper woodland, consistently in areas with canyons or cliffs. They avoid grasslands and in the Great Plains usually only occur in riparian areas.	No impact	No mesic forest or riparian zones occur in or adjacent to the project area.
Tricolored Bat *Perimyotis subflavus*	—	SGCN	Forest, woodland and riparian areas are important. Caves are very important to this species.	No impact	No forest, woodland, riparian areas, or caves occur in or adjacent to the project area.
Western Hog-nosed Skunk *Conepatus leuconotus*	—	SGCN	Habitats include woodlands, grasslands, and deserts, to 7200 feet; most common in rugged, rocky canyon country; little is known about the habitat of the ssp. *telmalestes*.	May impact	Grasslands occur in or adjacent to the project area.

Species Impact Table

Federal and State-listed Threatened and Endangered Species and Species of Greatest Conservation Need (SGCN) in Lubbock County, Texas

Species	Federal Status	State Status	Description of Suitable Habitat	Species Impact/Effect	Specific Project Information
REPTILES					
Eastern Box Turtle *Terrapene carolina*	—	SGCN	Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enter pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures. Also attracted to farms, old fields and cut-over woodlands, as well as creek bottoms and dense woodlands. Egg laying sites often are sandy or loamy soils in open areas.	No impact	No forests, woodlands, forest-field ectones, or aquatic habitats occur in or adjacent to the project area.
Keeled Earless Lizard *Holbrookia propinqua*	—	SGCN	Coastal dunes, barrier islands, and other sandy areas; eats insects and likely other small invertebrates; eggs laid underground March-September (most May-August).	No impact	No coastal dunes, barrier islands, or other sandy areas occur in or adjacent to the project area.
Massasauga *Sistrurus tergeminus*	—	SGCN	Habitats range from sphagnum bogs, swamps, marshes, shrub-dominated peatlands, wet meadows, and floodplains to dry woodland; prefers seasonal wetlands with a mixture of open grass-sedge areas and short closed canopy (edge situations). Quite common in gently rolling prairie occasionally broken by creek valley or rocky hillside.	No impact	No bogs, swamps, marshes, shrub-dominated peatlands, wet meadows, or woodlands occur in or adjacent to the project area.
Texas Horned Lizard *Phrynosoma cornutum*	—	T	Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September.	May impact	A few open areas with sparse vegetation are present in the project area. Terrestrial Reptile BMPs will be implemented, and contractors will be advised avoid harvester ant mounds in the selection of Project Specific Locations (PSLs).
Texas Map Turtle *Graptemys versa*	—	SGCN	Rivers with moderate current, abundant aquatic vegetation, and basking logs; also associated oxbows and lakes.	No impact	No rivers, oxbows, or lakes are present in or adjacent to the project area.
Western Box Turtle *Terrapene ornata*	—	SGCN	Ornate or western box turtles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. Very partial to sandy soil.	May impact	Prairie grasslands or pastures could provide suitable habitat within or adjacent to the project area.

Species Impact Table

Federal and State-listed Threatened and Endangered Species and Species of Greatest Conservation Need (SGCN) in Lubbock County, Texas

Species	Federal Status	State Status	Description of Suitable Habitat	Species Impact/Effect	Specific Project Information
Western Hognose Snake *Heterodon nasicus*	—	SGCN	Habitat consists of areas with sandy or gravelly soils, including prairies, sandhills, wide valleys, river floodplains, bajadas, semiagricultural areas (but not intensively cultivated land), margins of irrigation ditches, thornscrub woodlands, and chaparral thickets. Seems to prefer sandy and loamy soils, not necessarily flat. Periods of inactivity are spent burrowed in the soil or in existing burrows. Eggs are laid in nests a few inches below the ground surface.	May impact	Prairies or Conservation Reserve Program (CRP) grasslands could provide suitable habitat within or adjacent to the project area.
Western Rattlesnake *Crotalus viridis*	—	SGCN	Grassland, both desert and prairie; shrub desert rocky hillsides; edges of arid and semi-arid river breaks.	May impact	Grassland could provide suitable habitat within or adjacent to the project area.
PLANTS					
Cory's Ephedra *Ephedra coryi*	—	SGCN	Dune areas and dry grasslands in the southern Plains Country; Perennial; Flowering April-Sept; Fruiting May-Sept.	May impact	Dry grasslands occur within the project area, and the presence of the species cannot be ruled out.
Mexican Mud-plantain *Heteranthera mexicana*	—	SGCN	Wet clayey soils of resacas and ephemeral wetlands in South Texas and along margins of playas in the Panhandle; flowering June-December, only after sufficient rainfall.	No impact	Playas that occur in or adjacent to the project area are plowed and/or farmed, and the species is not present.

E – Endangered; T – Threatened; PT – Proposed Threatened; "–" – No designation occurring within identified county; SGCN – Species of Greatest Conservation Need: rare, but with no regulatory listing status

[1]The USFWS lists these species for Lubbock County, but these species are not listed on the TPWD's county list.

Sources: USFWS IPaC Resource Species List (accessed September 27, 2019); and TPWD, Rare, Threatened, and Endangered Species of Texas by County, Lubbock County (July 17, 2019 version, retrieved September 27, 2019), and Field Visit (March 2019).

EMST Vegetation Table

FID_Distri	Veg_ID	Common	EcoClass_I	EcoSystem	MOU_Habita	Phase	Acres	NS_Number	TPWD_Ecosy	EcoRegion	EcoRegion_	Feature_Ty	Shape_STAr	Shape_STLe
116939	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.03609486	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	344340.21191400000	5857.93402211000
116973	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.28192626	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	6616.78320313000	879.37450036300
117393	9105	Native Invasive: Juniper Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.00331202	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	8764.99609375000	473.44828231300
118602	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.41320841	TPW101.003	Urban	High Plains	25	VEGETATION	136077.28027300000	4143.93106413000
121972	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	2.91919465	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	26047.68261720000	2677.55366073000
122162	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.12421602	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	151017.12793000000	8409.71495313000
122388	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	1.29951411	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	119369.51562500000	3472.37073469000
122420	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.49297538	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	15281.06152340000	1090.73523969000
126232	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	16.95904961	TPW101.005	Agriculture	High Plains	25	VEGETATION	485038.08789100000	4330.83648162000
126306	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	10.58130039	TPW101.005	Agriculture	High Plains	25	VEGETATION	565047.88671900000	5048.07041542000
126328	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	1.56423863	TPW101.005	Agriculture	High Plains	25	VEGETATION	15601.26757810000	703.22413243000
126333	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	7.59087173	TPW101.005	Agriculture	High Plains	25	VEGETATION	665503.01464800000	5351.66039542000
126421	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	27.02437002	TPW101.005	Agriculture	High Plains	25	VEGETATION	1485147.50879000000	8644.57147738000
126426	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.27579852	TPW101.005	Agriculture	High Plains	25	VEGETATION	1135.95214844000	221.60122825300
126536	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.37463934	TPW101.005	Agriculture	High Plains	25	VEGETATION	158926.18554700000	3114.50929591000
126599	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	26.41056844	TPW101.005	Agriculture	High Plains	25	VEGETATION	511525.68847700000	3585.42259505000
126664	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	16.28585207	TPW101.005	Agriculture	High Plains	25	VEGETATION	228547.96875000000	1926.75359751000
126700	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	16.31516347	TPW101.005	Agriculture	High Plains	25	VEGETATION	362179.41894500000	2635.18889216000
133561	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	27.54925779	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	1321294.81836000000	7342.59459817000
133684	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	8.90937646	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	227253.16015600000	2317.44290388000
133713	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	35.92441660	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	268823.27148400000	3114.69505839000
133727	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.37894943	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	1533.55468750000	506.30971514100
133815	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.57965745	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	3421.10351563000	563.83446511500
134163	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.18464873	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	7703.07421875000	1704.59703619000
134230	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.29552558	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	1195.99609375000	270.39847711300
136716	9307	Row Crops	R077CY026TX	High Lime 16-21 PZ	Agriculture	7-South	9.51330389	TPW101.005	Agriculture	High Plains	25	VEGETATION	44242.64257810000	1176.12524437000
138407	6900	High Plains: Playa Lake	R077CY027TX	Playa 16-21 PZ	Playa	7-South	0.64397569	CES303.666	Western Great Plains Closed Depression Wetland	High Plains	25	VEGETATION	2606.07421875000	233.73999163500
139240	6907	High Plains: Playa Grassland	R077CY027TX	Playa 16-21 PZ	Playa	7-South	0.37259978	CES303.666	Western Great Plains Closed Depression Wetland	High Plains	25	VEGETATION	1507.85937500000	152.97769247100
139305	6907	High Plains: Playa Grassland	R077CY027TX	Playa 16-21 PZ	Playa	7-South	0.67869359	CES303.666	Western Great Plains Closed Depression Wetland	High Plains	25	VEGETATION	2746.58105469000	289.26099978300
140793	9307	Row Crops	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	8.04618217	TPW101.005	Agriculture	High Plains	25	VEGETATION	32564.37500000000	1725.66474565000
140902	9307	Row Crops	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	0.54601031	TPW101.005	Agriculture	High Plains	25	VEGETATION	2209.62695313000	348.14252358500
140907	9307	Row Crops	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	0.36203705	TPW101.005	Agriculture	High Plains	25	VEGETATION	1465.11132813000	196.71880999100
140911	9307	Row Crops	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	0.67747523	TPW101.005	Agriculture	High Plains	25	VEGETATION	2741.64550781000	309.53684758900
141879	6900	High Plains: Playa Lake	R077CY027TX	Playa 16-21 PZ	Playa	7-South	3.80063417	CES303.666	Western Great Plains Closed Depression Wetland	High Plains	25	VEGETATION	15380.61523440000	975.96580257900
141901	6900	High Plains: Playa Lake	R077CY027TX	Playa 16-21 PZ	Playa	7-South	13.37187264	CES303.666	Western Great Plains Closed Depression Wetland	High Plains	25	VEGETATION	54114.05078130000	1166.60797052000
143264	9327	CRP / Other Improved Grassland	R077CY027TX	Playa 16-21 PZ	Disturbed Prairie	7-South	2.03878547	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	8250.67089844000	481.28697246900
143376	9327	CRP / Other Improved Grassland	R077CY027TX	Playa 16-21 PZ	Disturbed Prairie	7-South	1.24767489	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	5049.16015625000	488.14965964600
143382	9327	CRP / Other Improved Grassland	R077CY027TX	Playa 16-21 PZ	Disturbed Prairie	7-South	0.37864050	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	1532.30175781000	246.80068979200
143383	9327	CRP / Other Improved Grassland	R077CY027TX	Playa 16-21 PZ	Disturbed Prairie	7-South	0.50421700	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	2040.49316406000	233.80493285800
143941	9000	Barren	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	0.30172404	TPW101.008	Barren	High Plains	25	VEGETATION	3205.40625000000	781.92021510400
143948	9000	Barren	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	0.67122857	TPW101.008	Barren	High Plains	25	VEGETATION	2716.36718750000	528.89042304200
150225	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	0.21071831	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	1125.17773438000	253.90845997600
150258	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	0.47891216	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	1938.08691406000	412.29414658100
150396	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	2.33264730	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	23910.92871090000	2539.81875250000
150467	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	0.16193616	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	1126.17089844000	1478.88687993000
150510	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	0.04139594	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	2502.66992188000	218.14608046900
150530	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	0.58906850	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	23956.06250000000	2333.36617838000
151218	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	1.19273272	TPW101.005	Agriculture	High Plains	25	VEGETATION	8514.87402344000	444.80446621700
151219	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	9.93770069	TPW101.005	Agriculture	High Plains	25	VEGETATION	326597.59960900000	3550.44596150000
151223	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	0.13257187	TPW101.005	Agriculture	High Plains	25	VEGETATION	536.49902343800	152.00041840900
153357	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	21.00514460	TPW101.005	Agriculture	High Plains	25	VEGETATION	2558551.06641000000	16430.72582200000
153369	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	15.67634137	TPW101.005	Agriculture	High Plains	25	VEGETATION	104801.23144500000	1456.05667603000
153377	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	5.38574459	TPW101.005	Agriculture	High Plains	25	VEGETATION	55206.14550780000	1285.90404757000
153380	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	1.54824522	TPW101.005	Agriculture	High Plains	25	VEGETATION	735976.99414100000	5010.52145318000
153405	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	0.44615745	TPW101.005	Agriculture	High Plains	25	VEGETATION	2097.73730469000	594.56191399700

EMST Vegetation Table

FID_Distri	Veg_ID	Common	EcoClass_I	EcoSystem	MOU_Habita	Phase	Acres	NS_Number	TPWD_Ecosy	EcoRegion	EcoRegion_	Feature_Ty	Shape_STAr	Shape_STLe
153422	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	8.92369118	TPW101.005	Agriculture	High Plains	25	VEGETATION	139900.50195300000	1706.99131274000
153456	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	1.11847919	TPW101.005	Agriculture	High Plains	25	VEGETATION	6106.10156250000	415.00046526900
153494	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	0.02403539	TPW101.005	Agriculture	High Plains	25	VEGETATION	3961.64257813000	469.69948297900
153526	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	0.45097573	TPW101.005	Agriculture	High Plains	25	VEGETATION	1825.03417969000	294.01904512100
153546	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	5.38565251	TPW101.005	Agriculture	High Plains	25	VEGETATION	527054.38671900000	5684.88185069000
153578	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	2.27125754	TPW101.005	Agriculture	High Plains	25	VEGETATION	465224.00195300000	3511.38506912000
157155	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	3.86701972	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	45038.32128910000	1257.32570230000
157186	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	0.34959839	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	1617.31933594000	340.47595591400
157197	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	0.67547890	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	15246.59570310000	573.19626798200
157202	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	0.18161839	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	734.98242187500	110.90137355700
157238	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	6.97204418	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	54390.93652340000	1171.56144261000
157340	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	13.63477209	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	141883.38769500000	1918.84003068000
157378	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	8.46325437	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	205694.58496100000	2293.35047296000
157400	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	0.66086703	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	2674.43457031000	316.25579134200
157429	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	9.88176027	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	135358.19628900000	2483.64817376000
157441	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	0.37601157	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	24187.01757810000	1416.46463674000
166093	307	Rolling Plains: Mixedgrass Prairie	R077CY036TX	Sandy Loam 16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.02257037	CES303.659	Central Mixedgrass Prairie	High Plains	25	VEGETATION	22982.58007810000	1672.49302269000
168788	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	5.69474047	TPW101.005	Agriculture	High Plains	25	VEGETATION	1072931.29492000000	11095.87177920000
168844	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	0.08793806	TPW101.005	Agriculture	High Plains	25	VEGETATION	522.17968750000	106.26206226000
168851	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	2.63610522	TPW101.005	Agriculture	High Plains	25	VEGETATION	13184.24511720000	532.55762621800
168861	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	0.01853789	TPW101.005	Agriculture	High Plains	25	VEGETATION	112697.16113300000	1618.53672961000
168877	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	0.01545004	TPW101.005	Agriculture	High Plains	25	VEGETATION	583448.44043000000	5443.91619603000
168955	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	2.66237463	TPW101.005	Agriculture	High Plains	25	VEGETATION	10774.24902340000	732.80057869000
168964	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	16.59697967	TPW101.005	Agriculture	High Plains	25	VEGETATION	432802.36230500000	5666.07448452000
169066	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	22.49799732	TPW101.005	Agriculture	High Plains	25	VEGETATION	549078.70898400000	4467.79623999000
173805	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	2.51940111	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	33766.85937500000	1611.47607164000
174094	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	9.01532032	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	110420.07421900000	2074.87720575000
325850	9000	Barren	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.31562080	TPW101.008	Barren	High Plains	25	VEGETATION	1277.27050781000	396.17149853300
326036	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.30412776	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	19904.20605470000	816.34666214600
326328	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.20318181	TPW101.003	Urban	High Plains	25	VEGETATION	86152.74511720000	3260.11704518000
326685	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	1.17046741	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	5539.41796875000	502.16413351800
326715	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.13526700	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	177849.85449200000	5889.56948326000
326782	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	4.59783516	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	35729.89941410000	2214.83834801000
326793	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.02395213	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	4333.31933594000	289.34551473500
326868	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	3.51387948	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	33236.00292970000	2470.82146508000
326982	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.36472401	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	5283.14257813000	562.98029423400
327019	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	1.03904146	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	9481.48535156000	598.31864115100
327060	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	2.07748428	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	18047.10937500000	1506.85826523000
327101	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	4.43600294	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	20257.17773440000	885.81401192700
327187	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	4.07488101	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	19472.49121090000	2116.58983524000
327323	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	11.53374047	TPW101.005	Agriculture	High Plains	25	VEGETATION	479618.97753900000	3740.12888522000
327359	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	12.72184230	TPW101.005	Agriculture	High Plains	25	VEGETATION	240531.23925800000	2614.37938167000
327457	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	15.74134539	TPW101.005	Agriculture	High Plains	25	VEGETATION	93022.63671880000	1404.84751185000
327466	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	1.01622491	TPW101.005	Agriculture	High Plains	25	VEGETATION	144328.22265600000	1629.09151189000
327513	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	1.61628079	TPW101.005	Agriculture	High Plains	25	VEGETATION	6540.85253906000	592.34010983400
327544	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.67794951	TPW101.005	Agriculture	High Plains	25	VEGETATION	2766.42675781000	395.95579146900
327669	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	6.66249060	TPW101.005	Agriculture	High Plains	25	VEGETATION	80529.05859380000	2367.71722794000
327680	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	3.24586284	TPW101.005	Agriculture	High Plains	25	VEGETATION	13153.33007810000	569.92440391700
327691	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	2.04330591	TPW101.005	Agriculture	High Plains	25	VEGETATION	8268.96582031000	553.50080752900
327698	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	2.57924627	TPW101.005	Agriculture	High Plains	25	VEGETATION	99453.35644530000	2359.84079528000
327808	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.45419714	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	5758.13671875000	378.03699451300
327904	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	12.75490597	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	159538.85351600000	2966.71723592000
327933	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	1.31761256	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	10631.57812500000	899.68426535700
328153	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.17592211	TPW101.005	Agriculture	High Plains	25	VEGETATION	4992.75585938000	552.66067555900
328182	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.37353791	TPW101.005	Agriculture	High Plains	25	VEGETATION	1550.84863281000	297.54139324100
328557	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	10.32570653	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	315992.48828100000	5064.63302914000
328586	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	6.74907403	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	67882.44042970000	1114.40190136000
328589	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.06987683	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	28181.11132810000	756.95728004900
328701	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	11.55735201	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	537574.42089800000	9930.60343305000
328739	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	1.62112457	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	837710.72460900000	5368.06760217000

EMST Vegetation Table

FID_Distri	Veg_ID	Common	EcoClass_I	EcoSystem	MOU_Habita	Phase	Acres	NS_Number	TPWD_Ecosy	EcoRegion	EcoRegion_	Feature_Ty	Shape_STAr	Shape_STLe
328867	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	15.67013793	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	117777.93652300000	1968.06922396000
328929	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.11416797	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	5965.99707031000	326.51326221900
329143	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.71267551	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	17331.95703130000	952.28979879600
329192	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	1.04559118	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	4231.35644531000	512.85544933300
330172	9307	Row Crops	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	3.05206449	TPW101.005	Agriculture	High Plains	25	VEGETATION	48297.24804690000	1521.64687946000
330253	9327	CRP / Other Improved Grassland	R077CY027TX	Playa 16-21 PZ	Disturbed Prairie	7-South	0.59897063	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	5060.97753906000	807.82682062300
330339	6900	High Plains: Playa Lake	R077CY027TX	Playa 16-21 PZ	Playa	7-South	0.08767719	CES303.666	Western Great Plains Closed Depression Wetland	High Plains	25	VEGETATION	44362.94726560000	800.62998568300
330432	9327	CRP / Other Improved Grassland	R077CY027TX	Playa 16-21 PZ	Disturbed Prairie	7-South	0.47498223	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	6708.03125000000	892.92597347700
330519	9327	CRP / Other Improved Grassland	R077CY027TX	Playa 16-21 PZ	Disturbed Prairie	7-South	3.54798046	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	46752.29785160000	802.21166195800
331379	9106	Native Invasive: Mesquite Shrubland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	0.38775483	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	29524.57421880000	741.08844855600
331396	9106	Native Invasive: Mesquite Shrubland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	0.28178598	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	41314.72851560000	1304.34806046000
331546	9411	Urban Low Intensity	R077CY028TXS	Limy Upland 16-21 PZ S	Urban	7-South	0.24545549	TPW101.003	Urban	High Plains	25	VEGETATION	2382.71386719000	355.23502814600
331548	9411	Urban Low Intensity	R077CY028TXS	Limy Upland 16-21 PZ S	Urban	7-South	0.27165827	TPW101.003	Urban	High Plains	25	VEGETATION	1099.36230469000	172.69681128200
331792	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	0.22972392	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	929.65917968800	176.38516216600
331864	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	2.02652899	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	9817.05273438000	522.64039352900
331881	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	0.24323097	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	1664.16699219000	242.74592012500
332102	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	1.00819271	TPW101.005	Agriculture	High Plains	25	VEGETATION	19827.03027340000	659.48899035000
332105	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	0.06237164	TPW101.005	Agriculture	High Plains	25	VEGETATION	22956.71093750000	687.41047338400
332261	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	1.55555465	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	7304.92871094000	402.48877493100
332321	9307	Row Crops	R077CY028TXS	Limy Upland 16-21 PZ S	Agriculture	7-South	1.74036255	TPW101.005	Agriculture	High Plains	25	VEGETATION	7042.99609375000	559.63831374600
332431	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	2.35540653	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	42245.56250000000	873.41199227300
332540	9327	CRP / Other Improved Grassland	R077CY028TXS	Limy Upland 16-21 PZ S	Disturbed Prairie	7-South	1.83473212	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	8731.60058594000	528.06728113300
332810	9000	Barren	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	0.31326406	TPW101.008	Barren	High Plains	25	VEGETATION	1267.73535156000	174.46890289300
332933	9106	Native Invasive: Mesquite Shrubland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	8.30991964	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	40251.26171880000	1324.80378146000
332936	9106	Native Invasive: Mesquite Shrubland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	0.01808111	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	63754.40136720000	1359.09703539000
333254	9411	Urban Low Intensity	R077CY036TX	Sandy Loam 16-21 PZ	Urban	7-South	0.00964279	TPW101.003	Urban	High Plains	25	VEGETATION	1436.33300781000	206.11073858500
333546	307	Rolling Plains: Mixedgrass Prairie	R077CY036TX	Sandy Loam 16-21 PZ	Mixed, Arid, Sand Grassland	7-South	10.84255027	CES303.659	Central Mixedgrass Prairie	High Plains	25	VEGETATION	101604.24707000000	1509.64120267000
333797	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	0.69688444	TPW101.005	Agriculture	High Plains	25	VEGETATION	13690.37011720000	575.74499186700
333909	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	10.60362422	TPW101.005	Agriculture	High Plains	25	VEGETATION	711954.60058600000	7690.51150607000
334006	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	8.38573999	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	52188.30273440000	1260.73371631000
334265	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	5.60628328	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	377202.17871100000	5958.77421443000
334342	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	0.34797106	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	6688.30078125000	589.96510095700
334346	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	0.01985063	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	2872.69433594000	279.90091065500
334494	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	0.42263145	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	31857.07031250000	1855.99227097000
334501	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	0.31379334	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	1269.87597656000	180.57246826300
372512	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.10415076	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	421.48339843800	268.77675196800
372532	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.02166015	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	2853.44238281000	267.35320837900
372536	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	1.21174992	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	VEGETATION	264570.12988300000	8089.49056178000
376460	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.33046946	TPW101.003	Urban	High Plains	25	VEGETATION	7822.63964844000	1115.00809775000
376461	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.30301112	TPW101.003	Urban	High Plains	25	VEGETATION	3819.25488281000	606.50846786400
376467	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.13334058	TPW101.003	Urban	High Plains	25	VEGETATION	2534.91308594000	369.58487187700
378549	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	2.63542943	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	15180.64257810000	1183.29476208000
378560	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.88719094	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	3590.33593750000	250.14429695300
378581	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	1.61075233	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	13366.71386720000	957.11082397800
378612	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	2.36746406	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	13071.02832030000	1093.77464152000
378713	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.60812476	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	22214.38476560000	3496.88895985000
378761	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.29067545	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	18419.31640630000	1900.29909578000
387377	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.00012589	TPW101.005	Agriculture	High Plains	25	VEGETATION	916.85351562500	148.94751706200
387384	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.00551340	TPW101.005	Agriculture	High Plains	25	VEGETATION	500.51562500000	113.73838802300
387395	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.00802516	TPW101.005	Agriculture	High Plains	25	VEGETATION	1290.95800781000	243.03488021700
387412	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	17.15137399	TPW101.005	Agriculture	High Plains	25	VEGETATION	172182.43750000000	1800.81448697000
387434	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.02882850	TPW101.005	Agriculture	High Plains	25	VEGETATION	6492.50781250000	365.97474955000
387436	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.00284279	TPW101.005	Agriculture	High Plains	25	VEGETATION	19601.77734380000	844.68102220500
387438	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	6.69378264	TPW101.005	Agriculture	High Plains	25	VEGETATION	131417.55371100000	2117.91194995000
387442	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	2.31656493	TPW101.005	Agriculture	High Plains	25	VEGETATION	571894.07617200000	4589.02238560000
387468	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	15.81909438	TPW101.005	Agriculture	High Plains	25	VEGETATION	794065.85839800000	4219.28970175000
387526	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	29.77081110	TPW101.005	Agriculture	High Plains	25	VEGETATION	1271802.90137000000	9097.89702718000
399683	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	1.56665829	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	6629.75000000000	469.05047504300
399753	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.64333944	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	3645.53710938000	312.20355436800

EMST Vegetation Table

FID_Distri	Veg_ID	Common	EcoClass_I	EcoSystem	MOU_Habita	Phase	Acres	NS_Number	TPWD_Ecosy	EcoRegion	EcoRegion_	Feature_Ty	Shape_STAr	Shape_STLe
399760	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	3.58245917	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	28261.19921880000	1084.62433153000
399761	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.38688259	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	1565.65820313000	895.58456976800
399762	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.40594473	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	126452.84960900000	2203.89527691000
399799	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	2.81887416	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	22826.20214840000	756.89185719900
399832	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.78071148	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	8554.20996094000	952.91205913100
399837	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	4.27440374	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	177068.66113300000	2852.16278719000
399864	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.49981125	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	2022.66699219000	545.20548266900
399874	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.02910599	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	49334.86230470000	2895.21037023000
399902	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	11.21412078	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	301066.65429700000	5036.59683465000
400005	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.00371178	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	280010.83203100000	4486.09961117000
415533	9000	Barren	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	0.00019190	TPW101.008	Barren	High Plains	25	VEGETATION	3404.97265625000	423.58150558400
419578	9307	Row Crops	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	0.00339210	TPW101.005	Agriculture	High Plains	25	VEGETATION	5414.26953125000	369.12203945000
419587	9307	Row Crops	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	0.00821450	TPW101.005	Agriculture	High Plains	25	VEGETATION	10459.00878910000	848.28320498700
427966	9411	Urban Low Intensity	R077CY028TX	Limy Upland 16-21 PZ	Urban	7-South	0.12200926	TPW101.003	Urban	High Plains	25	VEGETATION	493.75488281300	349.12704788200
428000	9411	Urban Low Intensity	R077CY028TX	Limy Upland 16-21 PZ	Urban	7-South	0.37649501	TPW101.003	Urban	High Plains	25	VEGETATION	222667.91308600000	13082.56035240000
428306	2907	High Plains: Shortgrass Prairie	R077CY028TX	Limy Upland 16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.09136093	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	369.72460937500	431.37935001200
428307	2907	High Plains: Shortgrass Prairie	R077CY028TX	Limy Upland 16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.11925913	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	598.85351562500	143.64264871000
430341	9307	Row Crops	R077CY028TX	Limy Upland 16-21 PZ	Agriculture	7-South	0.00015813	TPW101.005	Agriculture	High Plains	25	VEGETATION	294945.91113300000	2366.55450166000
430342	9307	Row Crops	R077CY028TX	Limy Upland 16-21 PZ	Agriculture	7-South	0.14637776	TPW101.005	Agriculture	High Plains	25	VEGETATION	592.37011718800	339.22324587400
430346	9307	Row Crops	R077CY028TX	Limy Upland 16-21 PZ	Agriculture	7-South	12.58012358	TPW101.005	Agriculture	High Plains	25	VEGETATION	191212.78515600000	2031.90727109000
432389	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.00988771	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	131243.24707000000	2430.51854359000
432390	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.03315541	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	951.84375000000	302.54829433900
433070	9307	Row Crops	R077CY028TX	Limy Upland 16-21 PZ	Agriculture	7-South	0.01957905	TPW101.005	Agriculture	High Plains	25	VEGETATION	4363.85546875000	425.42093926700
433219	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.02857906	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	21282.63769530000	1009.74536030000
433220	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.49135271	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	48163.00585940000	1112.89003856000
433227	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	16.29041494	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	80073.78515630000	2245.80821219000
433239	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	39.73694892	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	240344.07128900000	2389.91209436000
442562	307	Rolling Plains: Mixedgrass Prairie	R077CY036TX	Sandy Loam 16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.28655896	CES303.659	Central Mixedgrass Prairie	High Plains	25	VEGETATION	1459.24609375000	207.60242405900
442567	307	Rolling Plains: Mixedgrass Prairie	R077CY036TX	Sandy Loam 16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.93745997	CES303.659	Central Mixedgrass Prairie	High Plains	25	VEGETATION	8171.08691406000	1020.64700397000
443135	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	0.48269811	TPW101.005	Agriculture	High Plains	25	VEGETATION	16393.36523440000	830.92965623200
443136	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	5.29845987	TPW101.005	Agriculture	High Plains	25	VEGETATION	42804.16699220000	798.10079119800
443142	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	3.69722821	TPW101.005	Agriculture	High Plains	25	VEGETATION	28062.69531250000	895.82494410700
443145	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	16.48333749	TPW101.005	Agriculture	High Plains	25	VEGETATION	368478.90332000000	3713.90320166000
444079	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	10.69636282	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	223015.79296900000	3187.58851552000
467585	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	1.72352240	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	VEGETATION	199059.64453100000	16277.87416590000
467619	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	3.90301612	TPW101.005	Agriculture	High Plains	25	VEGETATION	522709.29296900000	4356.83286854000
467620	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	24.42106243	TPW101.005	Agriculture	High Plains	25	VEGETATION	1057823.91504000000	9291.56884690000
467623	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.45382443	TPW101.005	Agriculture	High Plains	25	VEGETATION	3295584.22754000000	18039.27376560000
467697	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	42.70194396	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	3838009.69238000000	27787.47609030000
467785	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.02696056	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	458451.76074200000	6773.84059610000
467849	307	Rolling Plains: Mixedgrass Prairie	R077CY036TX	Sandy Loam 16-21 PZ	Mixed, Arid, Sand Grassland	7-South	2.79813091	CES303.659	Central Mixedgrass Prairie	High Plains	25	VEGETATION	13717.56347660000	1203.55454524000
467859	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	0.25596813	TPW101.005	Agriculture	High Plains	25	VEGETATION	5205.60156250000	515.73858791700
467863	9307	Row Crops	R077CY036TX	Sandy Loam 16-21 PZ	Agriculture	7-South	1.15388898	TPW101.005	Agriculture	High Plains	25	VEGETATION	268648.92968800000	3052.27687275000
467872	9327	CRP / Other Improved Grassland	R077CY036TX	Sandy Loam 16-21 PZ	Disturbed Prairie	7-South	4.16415889	TPW101.002	Disturbance Grassland	High Plains	25	VEGETATION	24084.46191410000	1366.71957945000
117711	9410	Urban High Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.33441610	TPW101.003	Urban	High Plains	25	ROADWAY	21843.08593750000	2937.57366250000
118602	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.74100625	TPW101.003	Urban	High Plains	25	ROADWAY	11095.68652340000	1993.48174953000
122162	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.16298175	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROADWAY	14112.63671880000	4042.19817934000
122420	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.06372619	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROADWAY	257.88964843800	252.30176853800
150467	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	0.24740835	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROADWAY	2414.20703125000	814.80528833700
326328	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	1.79718068	TPW101.003	Urban	High Plains	25	ROADWAY	22317.39355470000	2807.21903690000
117711	9410	Urban High Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.17280207	TPW101.003	Urban	High Plains	25	ROW	19615.26269530000	5555.01917227000
118602	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.83808282	TPW101.003	Urban	High Plains	25	ROW	10901.60644530000	4245.90328121000
122162	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.16295996	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	14402.68652340000	8019.65974435000
122420	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.45297037	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	1833.10644531000	480.53982322700
126664	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.21037812	TPW101.005	Agriculture	High Plains	25	ROW	1765.28320313000	804.48336353800
126700	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.03448151	TPW101.005	Agriculture	High Plains	25	ROW	1060.99218750000	576.48891081600
150467	2907	High Plains: Shortgrass Prairie	R077CY028TXS	Limy Upland 16-21 PZ S	Mixed, Arid, Sand Grassland	7-South	0.24742924	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	2409.41015625000	1620.89602212000
326328	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	1.13076213	TPW101.003	Urban	High Plains	25	ROW	13723.08105470000	5275.29163493000
327323	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.25483278	TPW101.005	Agriculture	High Plains	25	ROW	2802.57519531000	1838.93697663000
327359	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.02649000	TPW101.005	Agriculture	High Plains	25	ROW	331.93164062500	1339.10346836000

EMST Vegetation Table

FID_Distri	Veg_ID	Common	EcoClass_I	EcoSystem	MOU_Habita	Phase	Acres	NS_Number	TPWD_Ecosy	EcoRegion	EcoRegion_	Feature_Ty	Shape_STAr	Shape_STLe
467697	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.06096812	TPW101.002	Disturbance Grassland	High Plains	25	ROW	2137.80566406000	1741.39887561000
372512	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.28157100	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	ROADWAY	1139.47656250000	385.80331973400
372536	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	2.23360817	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	ROADWAY	9039.09277344000	2199.38464258000
376461	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.38277266	TPW101.003	Urban	High Plains	25	ROADWAY	1549.02539063000	385.06368338600
376467	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.29964505	TPW101.003	Urban	High Plains	25	ROADWAY	1212.62011719000	306.50771190500
378560	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.00000412	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROADWAY	0.01660156250	2.05594035710
378581	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.40296457	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROADWAY	1630.73730469000	597.31589641800
378600	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.03150959	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROADWAY	127.51660156300	121.64682807900
378713	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	1.25631334	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROADWAY	26611.43554690000	5227.60543202000
415533	9000	Barren	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	0.03220515	TPW101.008	Barren	High Plains	25	ROADWAY	1724.28613281000	426.28414279900
427966	9411	Urban Low Intensity	R077CY028TX	Limy Upland 16-21 PZ	Urban	7-South	1.12781035	TPW101.003	Urban	High Plains	25	ROADWAY	4564.08593750000	1131.14448186000
428000	9411	Urban Low Intensity	R077CY028TX	Limy Upland 16-21 PZ	Urban	7-South	1.64905689	TPW101.003	Urban	High Plains	25	ROADWAY	74342.02636720000	15037.89820460000
428306	2907	High Plains: Shortgrass Prairie	R077CY028TX	Limy Upland 16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.83893233	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROADWAY	3395.03906250000	1109.83691235000
467585	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.99163620	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROADWAY	11804.52734380000	3061.25406399000
372512	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.68373772	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	ROW	2766.99121094000	658.52118416200
372536	9106	Native Invasive: Mesquite Shrubland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	3.36619659	TPW101.001	Native Invasive Shrub and Woodland	High Plains	25	ROW	13898.46386720000	4103.46043299000
376461	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.84397155	TPW101.003	Urban	High Plains	25	ROW	3415.43359375000	773.70666131300
376467	9411	Urban Low Intensity	R077CY022TX	Deep Hardland16-21 PZ	Urban	7-South	0.58749762	TPW101.003	Urban	High Plains	25	ROW	2416.73144531000	606.17833013000
378560	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.16119549	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	652.33691406300	149.79619848000
378581	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	1.15266031	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	4664.65234375000	1126.98322244000
378600	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.41780742	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	1911.02539063000	615.18870173000
378612	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	0.11706499	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	473.74511718800	139.53676373100
378713	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	1.37028348	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	33969.82910160000	9897.57035201000
387377	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.01291481	TPW101.005	Agriculture	High Plains	25	ROW	52.26269531250	73.24203832430
387395	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.01727666	TPW101.005	Agriculture	High Plains	25	ROW	69.91503906250	55.09724991860
387468	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.09631596	TPW101.005	Agriculture	High Plains	25	ROW	1225.39453125000	1019.70916699000
387526	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.20279580	TPW101.005	Agriculture	High Plains	25	ROW	3567.82617188000	2773.97288022000
399760	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.40669827	TPW101.002	Disturbance Grassland	High Plains	25	ROW	1645.84863281000	632.00668254600
399761	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.84144076	TPW101.002	Disturbance Grassland	High Plains	25	ROW	3405.19042969000	1346.58009865000
399762	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.12181029	TPW101.002	Disturbance Grassland	High Plains	25	ROW	492.95019531300	262.65700144400
399799	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.11967948	TPW101.002	Disturbance Grassland	High Plains	25	ROW	484.32617187500	407.54796917400
399832	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.00981080	TPW101.002	Disturbance Grassland	High Plains	25	ROW	39.70214843750	25.65949685890
399864	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.11963443	TPW101.002	Disturbance Grassland	High Plains	25	ROW	484.14550781300	315.89486452100
399902	9327	CRP / Other Improved Grassland	R077CY022TX	Deep Hardland16-21 PZ	Disturbed Prairie	7-South	0.00016847	TPW101.002	Disturbance Grassland	High Plains	25	ROW	840.01562500000	1001.27410026000
415533	9000	Barren	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	0.03938351	TPW101.008	Barren	High Plains	25	ROW	3748.61230469000	848.46759496700
419587	9307	Row Crops	R077CY027TX	Playa 16-21 PZ	Agriculture	7-South	0.04342998	TPW101.005	Agriculture	High Plains	25	ROW	343.43945312500	96.57969176170
427966	9411	Urban Low Intensity	R077CY028TX	Limy Upland 16-21 PZ	Urban	7-South	1.80326209	TPW101.003	Urban	High Plains	25	ROW	7297.54296875000	1956.35823332000
428000	9411	Urban Low Intensity	R077CY028TX	Limy Upland 16-21 PZ	Urban	7-South	2.89687041	TPW101.003	Urban	High Plains	25	ROW	46702.48242190000	14223.97732170000
428306	2907	High Plains: Shortgrass Prairie	R077CY028TX	Limy Upland 16-21 PZ	Mixed, Arid, Sand Grassland	7-South	2.39007169	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	9672.27734375000	2272.56813106000
430341	9307	Row Crops	R077CY028TX	Limy Upland 16-21 PZ	Agriculture	7-South	0.37023841	TPW101.005	Agriculture	High Plains	25	ROW	1537.99316406000	1194.28393404000
432389	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.03816270	TPW101.002	Disturbance Grassland	High Plains	25	ROW	154.43847656300	183.67152698000
432390	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.10078713	TPW101.002	Disturbance Grassland	High Plains	25	ROW	428.66015625000	301.28018501500
433070	9307	Row Crops	R077CY028TX	Limy Upland 16-21 PZ	Agriculture	7-South	0.00384802	TPW101.005	Agriculture	High Plains	25	ROW	734.66308593800	325.06309089400
433219	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.12147855	TPW101.002	Disturbance Grassland	High Plains	25	ROW	535.47070312500	548.48731946400
433220	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.17499501	TPW101.002	Disturbance Grassland	High Plains	25	ROW	708.17968750000	399.86071451000
433227	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.20346567	TPW101.002	Disturbance Grassland	High Plains	25	ROW	823.39550781300	1154.59828632000
433239	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	1.03380463	TPW101.002	Disturbance Grassland	High Plains	25	ROW	10702.25781250000	3369.45689713000
467585	2907	High Plains: Shortgrass Prairie	R077CY022TX	Deep Hardland16-21 PZ	Mixed, Arid, Sand Grassland	7-South	2.21993621	CES303.672	Western Great Plains Shortgrass Prairie	High Plains	25	ROW	25824.68554690000	6078.95927532000
467619	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.30110186	TPW101.005	Agriculture	High Plains	25	ROW	1218.51660156000	421.76002848800
467620	9307	Row Crops	R077CY022TX	Deep Hardland16-21 PZ	Agriculture	7-South	0.37509514	TPW101.005	Agriculture	High Plains	25	ROW	2801.74414063000	1995.51939170000
467785	9327	CRP / Other Improved Grassland	R077CY028TX	Limy Upland 16-21 PZ	Disturbed Prairie	7-South	0.12213599	TPW101.002	Disturbance Grassland	High Plains	25	ROW	494.26562500000	711.72438840900

Field-verified Vegetation MOU Summary

Potential Impacts[1] to Field-verified MOU Vegetation

EMST Vegetation Type	Ecological System Type	TxDOT/TPWD MOU Vegetation Type	MOU Threshold (acres)	Acres within Project Area
Row Crops	Agriculture	Agriculture	10	631.51
Total Potential Impacts to Agriculture MOU Vegetation				**631.51**
Rolling Plains: Mixedgrass Prairie	Central Mixedgrass Prairie	Mixed, Arid, Sand Grassland	2	39.06
Total Potential Impacts to Mixed, Arid, Sand, Grassland MOU Vegetation				**39.06**
CRP/Other Improved Grassland	Disturbance Grassland	Disturbed Prairie	3	45.09
Exotic Invasive: Elm/Olive Woodland	Invasive Shrub and Woodland			1.91
Total Potential Impacts to Disturbed Prairie MOU Vegetation				**47.0**
High Plains: Floodplain Herbaceous Vegetation	Western Great Plains Floodplain	Western Wetlands, Riparian	0.1	122.15
High Plains: Playa Grassland	Western Great Plains Closed Depression Wetland	Western Wetlands, Riparian		39.14
Total Potential Impacts to Western Wetlands, Riparian MOU Vegetation				**161.29**
Urban Low Intensity	Urban	Urban	NA	97.54
Total Potential Impacts to Urban MOU Vegetation				**97.54**

[1]Based on ROW to ROW impacts

Project Area Photographs

Photo 1. Existing Transportation and Urban Low Intensity vegetation type in the project area along FM 2641, facing east.

Photo 2. Row Crops vegetation type south of FM 2641, facing southwest.

Project Area Photographs

Photo 3. CRP/Other Iproved Grasses vegetation type west of Research Boulevard, facing northwest.

Photo 4. Rolling Plains: Mixedgrass Prairie vegetation vegetation west of Research Boulevard, facing south.

Project Area Photographs

Photo 5. Exotic Invasive: Elm/Olive Woodland vegetation in the project area south of FM 2641, facing south.

Photo 6. High Plains: Floodplain Herbaceous Vegetation and High Plains: Playa Grassland vegetation within and adjacent to a farmed playa in the project area, facing east.

Element Occurrence Record

Scientific Name: Athene cunicularia hypugaea
Occurrence #: 8 **Eo Id:** 7272
Common Name: Western Burrowing Owl
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G4T4 **State Rank:** S2
Federal Status:

Location Information:

Directions

LUBBOCK LAKE LANDMARK STATE HISTORIC PARK; ON YELLOW HOUSE DRAW IN NORTHWEST LUBBOCK

Survey Information:

First Observation: 1996-01-19 **Survey Date:** **Last Observation:** 1996-11-16
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description:

Comments: COMMONLY SEEN ON EAST SIDE OF YELLOW HOUSE DRAW IN THE NORTHEAST PORTION OF PARK

Protection Comments:

Management Comments:

Data:

EO Data: TWO INDIVIDUALS OBSERVED 19 JANUARY 1996, 3 OBSERVED 23 FEBRUARY 1996, 5 OBSERVED 13/14 APRIL 1996, 2 OBSERVED 30 APRIL 1996, 2 OBSERVED 6 SEPTEMBER 1996, 7 OBSERVED 15/16 NOVEMBER 1996; ACTIVELY NESTS AT PARK

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

BRADLEY, ROBERT D. AND ROBERT J. BAKER. 1998. FINAL REPORT FOR THE FAUNAL SURVEY OF LUBBOCK LAKE LANDMARK STATE HISTORICAL PARK. FEBRUARY 5, 1998.

ANGULO, SAM. 1998. FAX TO DORINDA SCOTT PERTAINING TO ATHENE CUNICULARIA HYPUGAEA LOCATIONS AT LUBBOCK LAKE LANDMARK SHP. MAY 15, 1998.

Specimen:

Element Occurrence Record

Scientific Name: Conepatus leuconotus **Occurrence #:** 34 **Eo Id:** 13882

Common Name: Western hog-nosed skunk **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** S4 **Federal Status:**

Location Information:

Directions

Written directions stated that sight records of hog nosed skunks from 11 miles southwest of Lubbock, Lubbock County were documented.

Survey Information:

First Observation: no date **Survey Date:** no date **Last Observation:** no date

Eo Type: **Eo Rank:** H **Eo Rank Date:** no date

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: no date: Sight records of hog nosed skunks.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Manning, R. W., J. K. Jones, Jr., and R. R. Hollander. 1986. Northern limits of distribution of the hog-nosed skunk, Conepatus mesoleucus, in Texas. Texas Journal of Science 38(3):289-291.

Specimen:

Element Occurrence Record

Scientific Name: Cynomys ludovicianus **Occurrence #:** 5 **Eo Id:** 9022

Common Name: black-tailed prairie dog **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

From the junction of US62 and FM211, travel 5.80 miles east on FM211. Black-tailed prairie dog town is 0.15 miles south of FM211. The directions were created by database staff. The directions are generalized as this record consists of multiple populations/observations. The directions will lead to an actual observation that is central to all other observations.

Survey Information:

First Observation: 200-00-00 **Survey Date:** 2005-00-00 **Last Observation:** 2005-00-00

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2005-00-00

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 2000-2004: One black-tailed prairie dog town was digitized based on aerial imagery and observed during ground truthing. 2003-2005: 9 black-tailed dog towns were digitized based on aerial imagery.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Texas Parks and Wildlife. 2010. Texas Natural Diversity Database shapefiles, articles, information on black-tailed prairie dog colonies in Texas.

Specimen:

Element Occurrence Record

Scientific Name: Cynomys ludovicianus **Occurrence #:** 9 **Eo Id:** 9026

Common Name: black-tailed prairie dog **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

From the junction of fM1698 and US62, travel 0.88 miles north on 62. Black-tailed prairie dog town is 1.31 miles east of 62. The directions were created by database staff. The directions are generalized as this record consists of multiple populations/observations. The directions will lead to an actual observation that is central to all other observations.

Survey Information:

First Observation: 2000-00-00 **Survey Date:** 2005-00-00 **Last Observation:** 2005-00-00

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2005-00-00

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 2000-2004: 2 black-tailed prairie dog towns were digitized based on aerial imagery and observed during ground truthing. 2003-2005: one black-tailed prairie dog town was digitized based on aerial imagery

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Texas Parks and Wildlife. 2010. Texas Natural Diversity Database shapefiles, articles, information on black-tailed prairie dog colonies in Texas.

Specimen:

Element Occurrence Record

Scientific Name: Cynomys ludovicianus **Occurrence #:** 81 **Eo Id:** 9096

Common Name: black-tailed prairie dog **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

From the junction of FM3112 and US38, travel 0.15 miles east on 38. The black-tailed prairie dog town is 0.06 miles north of US38. The directions were created by database staff. The directions are generalized as this record consists of multiple populations/observations. The directions will lead to an actual observation that is central to all other observations.

Survey Information:

First Observation: 1994-00-00 **Survey Date:** 2004-02-16 **Last Observation:** 2004-02-16

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2004-02-16

Observed Area:

Comments:

General Description: 11 February 2004: Two habitat types are represented by this record for these years, 1) playa and 2) mesquite shrubland/playa
16 February 2004: shortgrass prairie/mesquite shrubland

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 1994-1997: 17 black-tailed prairie dog towns were digitized based on aerial imagery. 11 & 16 February 2004: 7 black-tailed prairie dog towns were digitized based on aerial imagery and observed during ground truthing.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Texas Parks and Wildlife. 2010. Texas Natural Diversity Database shapefiles, articles, information on black-tailed prairie dog colonies in Texas.

Specimen:

Element Occurrence Record

Scientific Name: Cynomys ludovicianus **Occurrence #:** 83 **Eo Id:** 9098

Common Name: black-tailed prairie dog **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

From the junction of Country Road 272 and FM400, travel 0.74 miles northeast on FM400. The black-tailed prairie dog town is 0.10 miles northwest of 400. The directions were created by database staff. The directions are generalized as this record consists of multiple populations/observations. The directions will lead to an actual observation that is central to all other observations.

Survey Information:

First Observation: 1994-00-00 **Survey Date:** 2004-02-11 **Last Observation:** 2004-02-11

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2004-02-11

Observed Area:

Comments:

General Description: 11 February 2004: shortgrass prairie

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 1994-1997: One black-tailed prairie dog town was digitized based on aerial imagery. 11 February 2004: 2 black-tailed prairie dog towns were digitized based on aerial imagery and observed during ground truthing.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Texas Parks and Wildlife. 2010. Texas Natural Diversity Database shapefiles, articles, information on black-tailed prairie dog colonies in Texas.

Specimen:

Element Occurrence Record

Scientific Name: Cynomys ludovicianus **Occurrence #:** 114 **Eo Id:** 9129

Common Name: black-tailed prairie dog **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

From the junction of Owl and US62, travel 0.21 miles southwest on 62. The black-tailed prairie dog town is 0.57 miles north of US62. The directions were created by database staff. The directions are generalized as this record consists of multiple populations/observations. The directions will lead to an actual observation that is central to all other observations.

Survey Information:

First Observation: 1999-00-00 **Survey Date:** 2005-06-08 **Last Observation:** 2005-06-08

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2005-06-08

Observed Area:

Comments:

General Description: 8 June 2005: shortgrass prairie

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 1999-2004 and 8 June 2005: 6 black-tailed prairie dog towns were digitized based on aerial imagery and observed during ground truthing.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Texas Parks and Wildlife. 2010. Texas Natural Diversity Database shapefiles, articles, information on black-tailed prairie dog colonies in Texas.

Specimen:

Element Occurrence Record

Scientific Name: Heteranthera mexicana
Occurrence #: 1 **Eo Id:** 4401
Common Name: Mexican mud-plantain
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G2G3 **State Rank:** S1
Federal Status:

Location Information:

Directions

"FOUND ON MARGINS OF A PLAYA LAKE LOCATED ABOUT 3 MILES SOUTHWEST OF ROPESVILLE, JUST NORTH OF THE TERRY COUNTY LINE ON THE EAST SIDE OF HIGHWAY 62-82, 22 SEPTEMBER 1993, P.D. TURNER 52" (TEX)

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1993-09-22
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: MARGIN OF PLAYA LAKE

Comments:

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

TURNER, P.D. (52). 1993. SPECIMEN #?. TEX-LL.

Specimen:

TURNER, P.D. (52). 1993. SPECIMEN #?. TEX-LL. (S93TURTXTXUS)

UNIVERSITY OF TEXAS AT AUSTIN HERBARIUM. 1993. PAUL D. TURNER #52, SPECIMEN # NONE TEX. 22 SEPTEMBER 1993.

Element Occurrence Record

Scientific Name: Phrynosoma cornutum **Occurrence #:** 52 **Eo Id:** 8626

Common Name: Texas horned lizard **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** T

Global Rank: G4G5 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

LUBBOCK LAKE LANDMARK STATE HISTORIC PARK, ON YELLOW HOUSE DRAW IN NORTHWEST LUBBOCK

Survey Information:

First Observation: 1996-04-14 **Survey Date:** **Last Observation:** 1996-04-14

Eo Type: **Eo Rank:** E **Eo Rank Date:** 1996-04-14

Observed Area:

Comments:

General Description: TRANSECT II - SHORTGRASS GRASSLAND; TRANSECT III - VARIED HABITATS, ENDS OF TRANSECT ON RIDGES WITH THE MIDDLE PORTION DISSECTING THE MAJOR NORTH-SOUTH DRAW

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: COLLECTED TWO SPECIMENS 14 APRIL 1996 ALONG TRANSECT II AND III

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

BRADLEY, ROBERT D. AND ROBERT J. BAKER. 1998. FINAL REPORT FOR THE FAUNAL SURVEY OF LUBBOCK LAKE LANDMARK STATE HISTORICAL PARK. FEBRUARY 5, 1998.

Specimen:

Element Occurrence Record

Scientific Name: Prairie Dog Town **Occurrence #:** 3 **Eo Id:** 2997

Common Name: **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: GNR **State Rank:** SNR **Federal Status:**

Location Information:

Directions

FROM JUNCTION OF 597 AND 168 AT ANTON, GO SOUTH 6.85 MILES ON STATE ROUTE 168, TURN LEFT ON LIGHT DUTY ROAD (AT THE INTERSECTION WITH THE SUBSTATION AT THE NORTHWEST SIDE), GO 2.0 MILES WEST, ROAD ENDS AT THE "T", PRAIRIE DOG TOWN WEST OF ROAD

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1982

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area: 700.00

Comments:

General Description:

Comments: CA. 700 ACRES

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

LINAM, LEE ANN JOHNSON. 1992. ENDANGERED SPECIES ACT SECTION 6 PROJECT. JOB NO. 22: BLACK-FOOTED FERRET (MUSTELA NIGRIPES) REINTRODUCTION EVALUATION STATUS SURVEY. JANUARY 3, 1992.

Specimen:

Element Occurrence Record

Scientific Name: Prairie Dog Town
Occurrence #: 60 **Eo Id:** 523
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: GNR **State Rank:** SNR
Federal Status:

Location Information:

Directions

FROM ROUTE 1730 WITH LOOP 289 PASSING ABOVE IT, GO SOUTH 3.9 MILES ON ROUTE 1730, TURN RIGHT AND GO SOUTH 3000 FEET ON UNIMPROVED ROAD, PRAIRIE DOG TOWN NORTH OF ROAD

Survey Information:

First Observation:
Survey Date:
Last Observation: 1978
Eo Type:
Eo Rank:
Eo Rank Date:
Observed Area: 165.20

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

LINAM, LEE ANN JOHNSON. 1992. ENDANGERED SPECIES ACT SECTION 6 PROJECT. JOB NO. 22: BLACK-FOOTED FERRET (MUSTELA NIGRIPES) REINTRODUCTION EVALUATION STATUS SURVEY. JANUARY 3, 1992.

Specimen:

Element Occurrence Record

Scientific Name: Prairie Dog Town
Occurrence #: 61 **Eo Id:** 8176
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: GNR **State Rank:** SNR
Federal Status:

Location Information:

Directions

FROM JUNCTION OF LIGHT DUTY ROAD AT SLIDE, GO WEST 2.75 MILES, TURN RIGHT AND GO NORTH 1.5 MILES ON UNIMPROVED ROAD, PRAIRIE DOG TOWN WEST OF ROAD

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1978
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area: 295.50

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

LINAM, LEE ANN JOHNSON. 1992. ENDANGERED SPECIES ACT SECTION 6 PROJECT. JOB NO. 22: BLACK-FOOTED FERRET (MUSTELA NIGRIPES) REINTRODUCTION EVALUATION STATUS SURVEY. JANUARY 3, 1992.

Specimen:

Element Occurrence Record

Scientific Name: Prairie Dog Town **Occurrence #:** 324 **Eo Id:** 8625

Common Name: **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: GNR **State Rank:** SNR **Federal Status:**

Location Information:

Directions

On Yellow House Draw in NW Lubbock; in Lubbock Lake Landmark SHP; The directions were created by database staff.

Survey Information:

First Observation: 1996 **Survey Date:** 1996 **Last Observation:** 1996

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description: Habitat described as short grass grassland.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 1996; numerous sightings near transect 2

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

BRADLEY, ROBERT D. AND ROBERT J. BAKER. 1998. FINAL REPORT FOR THE FAUNAL SURVEY OF LUBBOCK LAKE LANDMARK STATE HISTORICAL PARK. FEBRUARY 5, 1998.

Specimen:

Element Occurrence Record

Scientific Name: Spilogale putorius interrupta **Occurrence #:** 3 **Eo Id:** 7686

Common Name: plains spotted skunk **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4T4 **State Rank:** S1S3 **Federal Status:**

Location Information:

Directions

These specimens are northwest of Lubbock, TX. Directions were created by database staff. The directions are generalized as this record consists of multiple observations.

Survey Information:

First Observation: 1963-04-29 **Survey Date:** Spring 1972 **Last Observation:** Spring 1972

Eo Type: **Eo Rank:** E **Eo Rank Date:** 1963-04-29

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 29 April 1963: Skin, skull, and skeleton of one adult female. This animal has been previously observed at night in a tree. Approximately 20 feet away from the base of this tree was a burrow opening 3-5 inches in diameter where the live trap was set and baited with peanut butter. Two nights later, the animal was captured.; 23 April 1970: Skin, skull, and skeleton of one male preserved specimen; Spring 1972: Skin and skull one preserved specimen of unknown sex.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Packard, Robert L., and H. W. Garner. 1964. Records of some mammals from the Texas High Plains. The Texas Journal of Science 16:387-390.

Williams, Stephen L. 1995. Letter and specimens list of 27 April to Peggy Horner, Texas Parks and Wildlife Department, Conservation Scientist, regarding Vulpes and Spilogale specimens from Museum of Texas Tech University, Lubbock, TX.

Ferguson, Adam. 2014. Texas Skunk Record Database regarding five specices of skunk in Texas.

Specimen:

Museum of Texas Tech University, Texas Tech University, Lubbock, TX; L. Laws (#unknown), Catalog #793, Field #TK941434, 29 April 1963, TTU.

Museum of Texas Tech University, Texas Tech University, Lubbock, TX; R. Aucutt, S. L. Williams (#unknown), Catalog #17492, Field #TK937585, 23 April 1970, TTU.

[James Ford] Bell Museum of Natural History, University of Minnesota, St. Paul, MN; unknown (#unknown), Catalog #12567, Spring 1972, JFBM.

Element Occurrence Record

Scientific Name: Vulpes velox
Occurrence #: 9 **Eo Id:** 4119
Common Name: swift fox
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3 **State Rank:** S1
Federal Status:

Location Information:

Directions

AIRPORT NEAR HIGHWAY (LUBBOCK AIRPORT)

Survey Information:

First Observation: 1971-06-05 **Survey Date:** **Last Observation:** 1972-03-02
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 2 MALES, PLUS 3 FEMALES

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

DRAGOO, JERRY W., JERRY R. CHOATE, TERRY L. YATES, AND THOMAS P. O'FARRELL. 1990. EVOLUTIONARY AND TAXONOMIC RELATIONSHIPS AMONG NORTH AMERICAN ARID-LAND FOXES. J. MAMM. 71(3):318-332.

DOWLER, ROBERT C. 1995. CORRESPONDENCE LETTER TO PEGGY HORNER OF JULY 21, 1995.

Specimen:

SAN ANGELO STATE UNIVERSITY, NATURAL HISTORY COLLECTION. 1971. W. THORNTON, CATALOG # 686, 687 ASNHC. 5 JUNE 1971.

SAN ANGELO STATE UNIVERSITY, NATURAL HISTORY COLLECTION. 1972. W. THORNTON, CATALOG # 696 ASNHC. 2 MARCH 1972.

Element Occurrence Record

Scientific Name: Vulpes velox
Occurrence #: 47 **Eo Id:** 1798
Common Name: swift fox
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3 **State Rank:** S1
Federal Status:

Location Information:

Directions

ONE MILE SOUTHEAST OF 19TH STREET AND LOOP 289

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1966-12-17
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: ONE FEMALE, SKIN ONLY

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Williams, Stephen L. 1995. Letter and specimens list of 27 April to Peggy Horner, Texas Parks and Wildlife Department, Conservation Scientist, regarding Vulpes and Spilogale specimens from Museum of Texas Tech University, Lubbock, TX.

Specimen:

TEXAS TECH UNIVERSITY MUSEUM, LUBBOCK. 1966. H. GARNER, CATALOG # 3058 TTU. 17 DECEMBER 1966.